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February 28, 2020

VIA HAND DELIVERY

Hon. Kent A. Chandler
Executive Director
Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, KY 40602-0615

Re: ***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

Dear Executive Director Chandler,

Enclosed for filing on behalf of Big Rivers Electric Corporation ("Big Rivers") are an original and ten (10) copies of: (i) Big Rives' application for approval to modify its Member Rate Stability Mechanism tariff, cease deferring depreciation expenses, establish regulatory assets, amortize regulatory assets, and other appropriate relief; and (ii) a motion for confidential treatment.

Certain of Big Rivers' financial information and information related to special contracts, including their projected impact on future load capacity, are being filed pursuant to the motion for confidential treatment and are not subject to public disclosure under KRS 61.878(1)(c)(1) and KRS 278.160(3). As such, and pursuant to 807 KAR 5:001, Section 13(2)(a)(3), also enclosed is one (1) confidential paper copy of Big Rivers' confidential information.

Please feel free to contact me should you have any questions regarding this filing.

Sincerely,

R. Brooks Herrick

cc: Service List
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M. Evan Buckley, Esq.

BIG RIVERS ELECTRIC CORPORATION

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. 2020-00 064

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BIG RIVERS ELECTRIC CORPORATION

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. 2020-00 064

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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,	)	**Case No.**
CEASE DEFERRING DEPRECIATION	)	**2020-00 064**
EXPENSES, ESTABLISH REGULATORY ASSETS,	)	
AMORTIZE REGULATORY ASSETS, AND	)	
OTHER APPROPRIATE RELIEF	)	

APPLICATION

and

APPLICATION EXHIBITS

FILED: February 28, 2020

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, 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 (the "Commission"), pursuant to KRS 61.878 and 807 KAR 5:001 Section 13, to grant confidential protection to certain information contained in Big Rivers' Testimony submitted contemporaneously herewith in the above-styled matter. The information for which Big Rivers seeks confidential protection is hereinafter referred to as the "Confidential Information." Primarily, the Confidential Information pertains to Big Rivers' projected, confidential financial information and information related to proposed special contracts, including the impact such contracts would have on Big Rivers' future load characteristics, which would give insight into projected revenue amounts and information such as totals, margins, TIER, and cash balances, as well as potentially disclose some of the terms of special contracts that were negotiated confidentially.

2. One (1) copy of the paper pages containing Confidential Information, with the Confidential Information highlighted with transparent ink, printed on yellow paper, or otherwise marked "CONFIDENTIAL," is being filed under seal in hardcopy format with this motion. 807 KAR 5:001 Section 13(2)(a). Ten (10) copies of those pages with the Confidential Information redacted are also being filed with this motion.

3. 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.

4. 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 and have its confidential status removed. 807 KAR 5:001 Section 13(10)(b).

5. As discussed below, the Confidential Information is entitled to confidential treatment pursuant to KRS 61.878(1)(c)(1), which 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." Further, KRS 278.160(3) shields from disclosure "a provision of a special contract that contains rates and conditions of service not filed in a utility's general

schedule if such provision would otherwise be entitled to be excluded from the application of KRS 61.870 to 61.884 under the provisions of KRS 61.878(1)(c)(1)."

I. Big Rivers Faces Actual Competition

6. Big Rivers competes in the wholesale power markets to sell energy it produces in excess of its Members' needs. Big Rivers' ability to successfully compete in the wholesale power markets is dependent upon a combination of its ability to negotiate the maximum price for the power sold and its ability to keep its cost of production as low as possible. If Big Rivers' cost of producing a kilowatt-hour of energy increases, its competitive position against other power producers is adversely affected.

7. 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' apparent 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 on a regular basis in the future, and it is imperative that Big Rivers improve and maintain its credit profile.

8. As is evidenced by these economic pressures, Big Rivers has "competitors" as contemplated under KRS 61.878(1)(c)(1) and faces actual competition from other market participants.

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

9. 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. As noted above, the Confidential Information primarily consists of Big Rivers' financial projections for coming years, which is precisely the sort of information meant to be protected by KRS 61.878(1)(c)(1).

10. Further, the Confidential Information also contains information related to special contracts Big Rivers has privately negotiated with Nucor Corporation, and for which Commission approval has been sought in Case No. 2019-00365. As such, public disclosure of this Confidential Information is indicative of the market conditions Big Rivers expects to encounter and its ability to compete with competitors, as well as information related to Big Rivers' energy production and capacity as a result of the special contracts.

11. In *Hoy v. Kentucky Industrial Revitalization Authority*, 907 S.W.2d 766 (Ky. 1995), the Kentucky Supreme Court held that financial information submitted by General Electric Company with its application for investment tax credits was not subject to disclosure simply because it had been filed with a state agency. The Court applied the plain meaning rule to the statute, reasoning that "[i]t 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.'" *Id.* at 768.

12. Similarly, in *Marina Management Services, Inc. v. Commonwealth, Cabinet for Tourism*, 906 S.W.2d 318, 319 (Ky. 1995), the Court held: "[t]hese are records of privately owned marina operators, disclosure of which would unfairly advantage competing operators. The most obvious disadvantage may be the ability to ascertain the economic status of the entities without the hurdles systematically associated with acquisition of such information about privately owned organizations."

13. 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. As such, the Confidential Information is generally recognized as confidential and proprietary.

III. Disclosure of the Confidential Information Would Permit an Unfair Commercial Advantage to Big Rivers' Competitors

14. Disclosure of the Confidential Information would afford Big Rivers' competitors an unfair commercial advantage. As discussed above, Big Rivers faces actual competition in the power markets and in the credit markets. It is likely that Big Rivers would suffer competitive injury if the Confidential Information were publicly disclosed, and the information should therefore be subject to confidential treatment.

15. Just as the Kentucky Supreme Court noted in *Marina Management Services*, the most obvious unfair commercial advantage that would be gained by public disclosure of Big Rivers' internal, projected financial information and the privately negotiated terms of special contracts would be the ability of Big Rivers' competitors to "ascertain the economic status" of Big Rivers "without the hurdles systematically associated with acquisition of such information." *Marina Management Services*, 906 S.W.2d at 319.

16. Thus, Big Rivers' competitiveness will be adversely affected if potential counterparties and competitors are provided with Big Rivers' private, proprietary, and commercially-sensitive information. Accordingly, the public disclosure of the Confidential Information Big Rivers seeks to protect pursuant to KRS 61.878(1)(c)(1) would provide Big Rivers' competitors with an unfair commercial advantage.

IV. Time Period

17. Big Rivers requests that the Confidential Information relating to the Nucor contract remain confidential indefinitely for the same reasons the Commission granted confidential treatment to the confidential terms in the Nucor contract for an indefinite period of time in its January 22, 2020, and January 27, 2020, Orders in Case No. 2019-00365. Big Rivers requests that the remainder of the Confidential Information 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).

V. Conclusion

18. 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 28th day of February, 2020.

Respectfully submitted,

BIG RIVERS ELECTRIC CORPORATION

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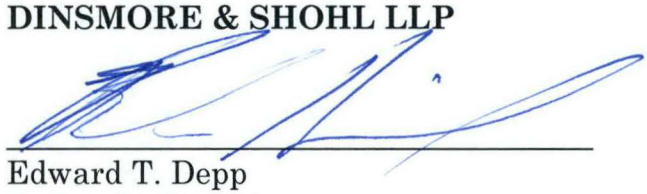

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Counsel to Big Rivers Electric Corporation

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, ESTABLISH REGULATORY ASSETS, AMORTIZE REGULATORY ASSETS, AND OTHER APPROPRIATE RELIEF	)	Case No. 2020-00064

APPLICATION

Comes now Big Rivers Electric Corporation ("Big Rivers" or the "Company"), by counsel, pursuant to KRS 278.040, KRS 278.220, 807 KAR 5:001, 807 KAR 5:011 and other applicable law, and for its Application in the above-captioned matter, respectfully states as follows.

I. INTRODUCTION

1. Big Rivers is pleased to file this application, which aims to pass through to Big Rivers' Members[1] short- and long-term benefits resulting from Big Rivers' successful mitigation of the loss of two large aluminum smelters and aid in the uniform restoration of Big Rivers' investment grade credit ratings. Following a long history of difficulty and uncertainty driven primarily by the externally-imposed risk of having the two large aluminum smelters located within its service territory, Big

[1] Big Rivers' Member-Owners are: Jackson Purchase Energy Corporation ("JPEC"), Kenergy Corp. ("Kenergy"), and Meade County Rural Electric Cooperative Corporation ("MCRECC") (collectively, the "Members" or "Members-Owners").

Rivers is poised to successfully implement the final step of its Load Concentration Analysis and Mitigation Plan (the "Mitigation Plan").

2. Years ago, Big Rivers focused on the necessity of planning for a potential closure of one or both of the smelters, and in 2012, the Mitigation Plan was born. Through the smelters' eventual departure, a multitude of regulatory proceedings, countless hours spent locating replacement load through both off-system sales and native growth, as well as a focused management audit (the "Focused Audit"), Big Rivers' management has shepherded the cooperative responsibly through challenging days. With this Application and with much appreciation for the Commission's support for the regulatory stability that has proven essential to this process, Big Rivers seeks approval to implement what it believes is likely the last step to financial stability and regaining its investment grade credit rating from all three major ratings agencies. As discussed in more detail below, Big Rivers believes this can be done in a way that creates both short- and long-term financial benefits to its Members while preserving a modest margin to ensure the cooperative's ongoing financial stability and compliance with debt covenants – and without the necessity of requesting an additional rate increase.

3. Due to Big Rivers' aggressive and successful execution of the Mitigation Plan and implementation of the recommendations included in the Focused Audit, Big Rivers has not sought to increase its base rates since 2013, even implementing multiple credits since the last base rate case, and yet Big Rivers has made great

strides to support and improve its financial stability in the wake of the monumental loss of native load resulting from the two smelters' exit from Big Rivers' system.

4. Through this filing, Big Rivers seeks to share the hard-fought successes of the Mitigation Plan with its Members. If the Commission grants Big Rivers the relief it requests, Big Rivers' base rates will remain stable for the foreseeable future. Indeed, the requested revisions to the Member Rate Stability Mechanism ("MRSM") Rider will stabilize the base rates charged to Members by providing both a short-term benefit – an annual credit for each year Big Rivers' adjusted net margins produce a times interest earned ratio ("TIER") exceeding 1.30 – and a long-term benefit – accelerated amortization of Big Rivers' regulatory assets.

5. Furthermore, by allowing Big Rivers to cease deferring depreciation on certain generation assets, establish regulatory assets to defer the expenses associated with retiring certain generation facilities, and amortize those regulatory assets over a period no longer than the length of the Members' existing all-requirements contracts with Big Rivers – all without a change to existing base rates – Big Rivers expects that its credit rating will improve, to the additional benefit of the Members.

II. BACKGROUND

6. Big Rivers is a rural electric cooperative corporation organized pursuant to KRS Chapter 279. Its full name is Big Rivers Electric Corporation. Its mailing address is P.O. Box 24, Henderson, Kentucky 42419-0024. Its street address is 201 Third Street, Henderson, Kentucky 42420. Its address for electronic mail service is regulatory@bigrivers.com. 807 KAR 5:001, Section 14(1).

7. Pursuant to 807 KAR 5:001, Section 14(1), Big Rivers states that this Application and the supporting exhibits, which are incorporated herein by reference, contain fully the facts on which the relief requested by Big Rivers is based.

8. A complete copy of the public portions of this Application has been sent to the Attorney General of Kentucky, Office of Rate Intervention (the "Attorney General") and counsel for Kentucky Industrial Utility Customers, Inc. ("KIUC").

9. Notice of the tariff change was provided to Big Rivers' Members by typewritten notice on or about February 28, 2020, and a copy of the notice provided to Big Rivers' Members is attached hereto as Exhibit A. 807 KAR 5:011, Section 8.

10. Big Rivers owns generating assets and purchases, transmits, and sells electricity at wholesale. Its principal purpose is to provide the wholesale electricity requirements of its three Members. The Members in turn provide retail electric service to approximately 118,000 consumers/retail members located in 22 western Kentucky counties: Ballard, Breckenridge, Caldwell, Carlisle, Crittenden, Daviess, Graves, Grayson, Hancock, Hardin, Henderson, Hopkins, Livingston, Lyon, Marshall, McCracken, McLean, Meade, Muhlenberg, Ohio, Union, and Webster.

11. Big Rivers was incorporated in the Commonwealth of Kentucky on June 14, 1961, and hereby attests that it is currently in good standing in Kentucky. 807 KAR 5:001, Section 14(2).

12. Big Rivers owns 1,444 MW of predominately coal-fired generation at three locations: the Wilson Station located near Centertown, Kentucky; the Coleman Station near Hawesville, Kentucky; and the Sebree Station located in Sebree,

Kentucky. Big Rivers has also contracted for 178 MW of hydroelectric capacity from the Southeastern Power Administration ("SEPA"); it maintains several small solar arrays (totaling 120 kW direct current) for educational purposes; and it is presently exploring the inclusion of additional solar resources to serve anticipated load growth in connection with a new facility to be developed by Nucor Corporation ("Nucor") in Meade County, as well as to further diversify its generation resources.

13. Big Rivers' Wilson Station consists of a single pulverized coal unit with a total rated net generating capacity of 417 MW. It includes a Foster Wheeler boiler, Westinghouse turbine generator, and a horizontal flue gas desulfurization ("FGD") system that is planned to be updated as described in greater detail in Big Rivers' 2020 environmental compliance plan (Case No. 2019-00435) (the "2020 ECP Case"). A total of 105 skilled employees are involved in the operation of the Wilson Station, which has proven to be a reliable source of baseload generation for Big Rivers and its Members for many decades.

14. Big Rivers' Coleman Station consists of three pulverized coal units with a total rated net generating capacity of 443 MW. Each unit includes a boiler and turbine generator commercialized between 1969 and 1972. The FGD system at the Coleman Station is of the Wheelabrator Air Pollution Control design and includes a single vertical absorber first commercialized in May of 2007; as discussed in Big Rivers' 2020 ECP case (Case No. 2019-00435), the Coleman Station's FGD system is planned to be repurposed to the Wilson Station. In May of 2014, the Coleman Station was idled and is presently incapable of operating in compliance with relevant

environmental regulation. Consequently, Big Rivers provides notice that it will retire the Coleman Station and requests authority to establish a regulatory asset to recover the unrecovered net investment as well as other costs associated with the retirement of the Coleman Station, including any costs of decommissioning, subject to the Rural Utilities Service ("RUS") also granting its approval for Big Rivers to establish this regulatory asset.

15. The Sebree Station includes multiple generating plants, specifically the Green Station, HMP&L Station Two and the Reid Station. The Green Station consists of two coal-fired units with a combined total rated net generating capacity of 454 MW. HMP&L Station Two includes two coal-fired units owned by the City of Henderson that were retired effective February 1, 2019. The Reid Station includes a coal-fired unit first commercialized in 1966 (net capacity of 45 MW, idled since April of 2016 due to environmental regulation) ("Reid Station Unit 1"), as well as a natural gas-fired combustion turbine (net capacity of 65 MW) ("Reid Station Unit 2"). As a result, in this Application, Big Rivers' provides notice that it will retire Reid Station Unit 1, which is the coal-fired unit that has been idled since April of 2016, and requests authority to establish a regulatory asset to recover the unrecovered net investment as well as other costs associated with the retirement of Reid Station Unit 1, including any costs of decommissioning, subject to RUS also granting its approval for Big Rivers to establish this regulatory asset.

16. Big Rivers is a member of Midcontinent Independent System Operator, Inc. ("MISO") and participates in that Regional Transmission Organization's ("RTO")

real-time and day ahead markets. After ensuring the satisfaction of its native load, Big Rivers capitalizes on its available capacity in a number of ways. For instance, Big Rivers has successfully received Commission approval to execute wholesale full-requirements purchased power contracts with entities in the State of Nebraska through 2026.[2] Furthermore, Big Rivers has negotiated an agreement to satisfy the full capacity and energy requirements of Owensboro Municipal Utilities through 2026,[3] and it provides dispatchable power to nine communities that are members of the Kentucky Municipal Energy Agency ("KyMEA") into 2029.[4] Additionally, through May of 2020, Big Rivers has contracted to sell capacity to five cities in Missouri.[5] Big Rivers also owns, operates, and maintains 1,297 miles of lines and related infrastructure, which provide for the transmission of power to its Members and third-party entities consistent with the MISO tariff.

III. REQUEST FOR EXPEDITED RULING

17. As noted above, a principal driver behind this application pertains to Big Rivers' efforts to rehabilitate its credit profile by regaining an investment grade

[2] *See* Case No. 2017-00134, *Big Rivers Electric Corporation Filing of Wholesale Contracts Pursuant to KRS 278.180 and 807 KAR 5:011 §13* (Ky. P.S.C. July 21, 2015).

[3] A copy of this contract, effective July 27, 2018, is available via the Commission's online library: https://www.psc.ky.gov/Home/Library?type=Tariffs&folder=Electric%5CBig%20Rivers%20Electric%20Corporation%5CContracts (last accessed July 31, 2019).

[4] *See* Case No. 2016-00306, *Filing of Agreement for the Purchase and Sale of Firm Capacity and Energy between Big Rivers Electric Corporation and the Kentucky Municipal Energy Agency* (Ky. P.S.C. Dec. 12, 2016).

[5] Copies of these contracts, each effective November 14, 2016, are also available via the Commission's online library. *See* n. 3, *supra*.

rating from the three major ratings agencies.[6] Given the review and analysis processes utilized by the ratings agencies, and Big Rivers plans to issue new debt as early as July 2020, it is important that Big Rivers be able to share the Commission's final order in this matter no later than June 30, 2020 in order to achieve interest savings in future financings.

18. Big Rivers' goal is to regain all three of its investment credit ratings, and Big Rivers' mitigation efforts to date have resulted in improvements in this regard. As is fully detailed in the Testimony of Robert W. Berry, Big Rivers' aggressive implementation of its Mitigation Plan has led to improvements to its credit ratings, but additional steps are needed in order for Big Rivers to be upgraded to an investment grade credit rating by all three of the major credit rating agencies.

19. Moody's has advised that it "could take a negative rating action if there was a shift to a less credit supportive regulatory environment," and has explicitly noted that one of the factors that could lead to a downgrade from the current non-investment grade level is if recovery of regulatory assets does not occur in future rate proceedings.[7]

20. Further, the credit ratings agencies have previously indicated that a lack of regulatory support for cost recovery of Big Rivers' assets that have benefited

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[6] *See* Case No. 2018-00146, *In the Matter of: Notice of Termination of Contracts and Application of Big Rivers Electric Corporation for a Declaratory Order and For Authority to Establish a Regulatory Asset*, Motion for Leave to File Settlement Agreement, at 8 (Ky. P.S.C. Oct. 22, 2018); *see also id.*, Order, (Ky. P.S.C. Oct. 23, 2018) (approving the Settlement Agreement and recognizing the importance of improving Big Rivers' credit rating).

[7] Testimony of Robert W. Berry at 21-22.

its Members for decades could be a credit challenge that would inhibit Big Rivers' ability to achieve an investment grade credit rating.[8]

21. Consequently, an order granting the relief requested in this Application could directly result in Big Rivers gaining an investment grade credit rating, which would allow it to achieve interest savings. In fact, Big Rivers currently intends to issue new debt as early as July of this year. Thus, if the Commission enters an order in this proceeding no later than June 30, 2020, Big Rivers believes this will allow sufficient time for all three credit rating agencies to potentially upgrade Big Rivers' credit rating to investment grade, allowing Big Rivers to realize financial savings on its upcoming debt issuance.

22. Accordingly, Big Rivers requests that the Commission issue its final order in this proceeding no later than June 30, 2020, which will allow Big Rivers to submit the order to the credit rating agencies in a timeframe that will help encourage an upgrade to investment grade credit prior to Big Rivers' planned debt issuance.

23. To facilitate the Commission's consideration of this Notice and Application on an expedited basis, Big Rivers has included its projected illustrative operation of the revised MRSM Rider, which illustrates both the short- and long-term benefits being provided to Big Rivers' Members through this proposal.[9] Big Rivers has also attached a proposed procedural schedule for the Commission's consideration as Exhibit B.

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[8] *Id.* at 25.

[9] *See* Exhibits Smith-6 and Smith-7 to the Testimony of Paul G. Smith.

IV. NOTICE OF FILING DEPRECIATION STUDY

24. In compliance with the Commission's December 14, 2018 Final Order in Case No. 2018-00313[10] and in order to facilitate the review of this application, Big Rivers also hereby files a copy of its 2019 depreciation study (the "2019 Depreciation Study"), which is attached hereto as Exhibit C.

25. The 2019 Depreciation Study did not result in material differences from the prior depreciation study used to develop Big Rivers' base rates in its 2012 rate case (Case No. 2012-00535) (the "2012 Rate Case") and its 2013 rate case (Case No. 2013-00199) (the "2013 Rate Case") with the 2019 Depreciation Study recommending that Big Rivers reduce its depreciation expenses by only $90,000.

26. As is fully explained in the Testimony of Paul G. Smith, Big Rivers therefore does not believe it is in the Members' interest to expend the significant additional time and costs associated with implementing the results of the 2019 Depreciation Study, especially in light of the relief requested in this proceeding. As described in more detail below, the requested relief will stabilize the rates charged to Big Rivers' Members and minimize the chances Big Rivers will require future base rate increases to recover the balance of the regulatory assets discussed below.

V. FUEL STACKING CLAUSE

27. Big Rivers is also taking this opportunity to address prior orders regarding its fuel allocation methodology.

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[10] *See In the Matter of: Motion of Big Rivers Electric Corporation for an Extension of Time to File a New Depreciation Study*, Order, P.S.C. Case No. 2018-00313 (Dec. 14, 2018).

28. In Case No. 2017-00287, KIUC argued that Big Rivers should "be required to allocate fuel costs between native load customers and off-system sales using a methodology in which all generation is economically stacked from the lowest to the highest each hour, with the lowest fuel expenses allocated to native load customers and the remaining fuel expense allocated to off-system sales each hour."[11]

29. The Commission ultimately found that Big Rivers' "six-month FAC review case was not the proper case to implement a change in BREC's fuel cost allocation methodology as requested by KIUC," and ordered that the stacking methodology be changed in Big Rivers' next base rate case or two-year fuel adjustment clause review.[12]

30. Then, in Case No. 2019-00007, which was Big Rivers' latest two-year fuel adjustment clause review -- after Big Rivers and KIUC agreed that a change to any fuel stacking methodology should be conducted in a base rate case -- the Commission ordered that "BREC should propose a change to its fuel cost allocation method in its next base rate case and should be prepared to implement that methodology by the conclusion of that case."[13]

31. Although Big Rivers indicated in the Settlement Agreement approved by the Commission in Case No. 2018-00146 (the "Station Two Case") that it would be

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[11] *In the Matter of: An Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2016 through April 30, 2017*, Order, Ky. P.S.C. Case No. 2017-00287, (Feb. 2, 2018), at 2.

[12] *In the Matter of: Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2016 through October 31, 2018*, Order, Ky. P.S.C. Case No. 2019-00007, (Dec. 26, 2019), at 3.

[13] *Id.*

filing a base rate case this year, as explained in more detail in the testimony accompanying this Application, Big Rivers has determined that it does not need an adjustment to its base rates and is therefore seeking the relief requested herein in lieu of a base rate case. As this is not a base rate case, Big Rivers is not seeking a change in its fuel cost allocation methodology.

32. Moreover, since KIUC's first request to change Big Rivers' fuel cost allocation methodology, Station Two (which had a relatively higher cost of operation compared to Big Rivers' other generating facilities) has ceased operation. Big Rivers' remaining generation facilities have similar dispatch costs, and, as a result of the Station Two closure, the requested change to the fuel stacking methodology would have a minimal variance to the system average fuel cost methodology currently reflected in Big Rivers' current fuel adjustment clause. Thus, the negligible impact on Member rates resulting from a change to the fuel stacking methodology does not justify the effort that would be required to make such a change at this time. Big Rivers understands that KIUC therefore no longer seeks a modification to Big Rivers' fuel allocation methodology.

VI. REQUEST FOR AUTHORITY TO DECLARE WILSON STATION "USED AND USEFUL" TO SERVE MEMBERS AND TO DISCONTINUE DEFERRAL OF MONTHLY DEPRECIATION EXPENSE

33. Big Rivers filed its 2013 Rate Case as part of its implementation of the Mitigation Plan and in response to the loss of the smelter load. The loss of one of the smelters to Big Rivers' native load represented approximately 90 percent of the capacity of the Wilson Station. As a result, at the time of Big Rivers' filing of its

application for an adjustment to its base rates in 2013, Big Rivers expected to idle the Wilson Station to reduce its operating costs.[14]

34. In the 2013 Rate Case, the Commission ultimately determined that the Wilson Station was not needed to serve the customers on the Big Rivers system and, therefore, represented excess capacity.[15]

35. Accordingly, in the 2013 Rate Case, the Commission ordered that "[e]ffective February 1, 2014, Big Rivers should defer the depreciation on the Wilson Station in a regulatory asset account rather than record that depreciation as an expense. It should continue to credit depreciation on the Wilson Station to its accumulated depreciation, or depreciation reserve, account."[16]

36. While Big Rivers expected to idle the Wilson Station at the time of the 2013 Rate Case, the Wilson Station's favorable operating costs enabled Big Rivers to continue to run Wilson Station, resulting in additional off-system sales that helped offset the fixed cost to its Members. The Wilson Station remains the least cost unit in Big Rivers' system and also has the lowest cost for future environmental compliance.

37. Indeed, in the Station Two Case, the Commission approved a Settlement Agreement (the "Station Two Case Settlement Agreement") between Big Rivers, the Attorney General, and KIUC agreeing that the Wilson Station was "used and useful"

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[14] *In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period*, Order, P.S.C. Case No. 2013-00199, (Apr. 25, 2014), at 4.

[15] *Id.* at 15-16.

[16] *Id.* at 50.

for the benefit of Big Rivers' Members, especially in light of the planned retirement of Station Two.

38. In that case, Big Rivers filed an application seeking a declaratory order that the Station Two Generation Station was no longer capable of normal, continuous, reliable operation for the economically competitive production of electricity, and, therefore, Big Rivers' Station Two Contracts with the City of Henderson and the Henderson Utility Commission had terminated.[17]

39. The Commission entered an Order "confirming the termination of the Station Two Contracts,"[18] and approved the Station Two Case Settlement Agreement,[19] wherein the Attorney General and KIUC agreed that the Wilson Station is "used and useful" for the benefit of Big Rivers' Members, agreeing as follows:

> "(i) . . . Big Rivers' Wilson generating station is necessary to serve Big Rivers' Native System peak demand and energy needs, based on information provided in Big Rivers' latest IRP, Case No. 2017-00384; (ii) that although Big Rivers is not currently recovering depreciation for its Wilson station or the fixed costs it incurs to operate Wilson, Wilson has operated and provided benefits to Big Rivers' members by, among other things, reducing wholesale and retail fuel adjustment clause charges, and by enabling Big Rivers to secure new load to mitigate the loss of the smelter load; and (iii) that although Wilson was expected to be idled during the pendency of Case No. 2013-00199, it is needed to serve customers on the Big Rivers System.[20]

[17] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset*, Order, P.S.C. Case No. 2018-00146, (Oct. 23, 2018).

[18] *Id.*, Order, P.S.C. Case No. 2018-00146 (Aug 29, 2018), at 10.

[19] *Id.*, Order, P.S.C. Case No. 2018-00146 (Oct. 23, 2018), at 9.

[20] *Id.*, Motion for Leave to File Settlement Agreement, Stipulation, and Recommendation and Supporting Testimony, P.S.C. Case No. 2018-00146 (Oct. 22, 2018), Settlement Agreement at ¶ 6.

40. Thus, for the reasons outlined above, and as agreed upon by the parties to the Station Two Case Settlement Agreement, which the Commission approved, the Wilson Station is "used and useful" for the generation of electricity to serve the benefit of Big Rivers' Members. And because the Wilson Station is a "used and useful" asset, Big Rivers should be authorized to recover the costs it incurs related to that facility, including depreciation expenses.[21]

41. Accordingly, Big Rivers respectfully requests that the Commission authorize Big Rivers to cease deferring the depreciation expense of the Wilson Station into a regulatory asset as of January 1, 2021 (and to permit recovery of the deferred expense through amortization as described more fully herein). As of December 31, 2019, the value of the Wilson Station Depreciation Deferral regulatory asset was approximately $120.5 million. Big Rivers also seeks approval to resume recovery of the Wilson Station depreciation expense beginning on January 1, 2021 because Wilson Station is used and useful for the benefit of Big Rivers' Members.

[21] *See* KRS 279.010(12) (defining "system" to include "any plant, works, facilities, and properties, and all parts thereof and appurtenances thereto, used or useful in the generation, production, transmission, or distribution of electric energy." (emphasis added)); *In the Matter of: An Adjustment of Rider AMRP of the Union Light, Heat and Power Company*, Order, P.S.C. Case No. 2003-00103 (Aug. 25, 2003), at p. 3 n.5 (determining gas utility assets were "used and useful" based on a definition meaning simply "the main has gas flowing through it and at least one customer has been connected to it"); *In the Matter of: Adjustment of the Rates of Auxier Road Gas Company, Inc., for an Increase in Gas Rates*, Order, P.S.C. Case No. 9318 (Dec. 20, 1985) (determining assets were not "used and useful" because the assets were "of no use to the ratepayers").

VII. REQUEST FOR AUTHORITY TO ESTABLISH REGULATORY ASSETS

A. Requested Establishment of Regulatory Assets

1. Establish Regulatory Asset for the Remaining Net Book Value of the Coleman Station and Other Costs Such as Decommissioning

i. Retirement

42. The Coleman Station was idled in 2014, not long after the second aluminum smelter exited the Big Rivers system. Since that time, energy and capacity prices in the competitive markets have not improved. Additionally, the idling of the Coleman Station has now exceeded the idling period allowed by MISO, and the interconnection rights at Coleman Station have therefore terminated. The combination of uneconomic pricing and the termination of interconnection rights effectively eliminates the financial viability of reenergizing the Coleman Station.

43. Consequently, Big Rivers will formally retire the Coleman Station following the entry of an Order in this proceeding granting the relief requested herein and RUS's approval of Big Rivers' request to create a regulatory asset related to the retirement of the Coleman Station. Big Rivers will then promptly begin work to decommission the Coleman Station.

ii. Cease Depreciation Deferral

44. In the 2012 Rate Case, the Commission determined that the depreciation expense associated with the Coleman Station should be excluded from recovery in Big Rivers' base rates and granted Big Rivers authorization to establish a regulatory asset for the depreciation expense associated with the Coleman

Station.[22] The Commission ordered Big Rivers to continue deferring those depreciation expenses into a regulatory asset in the 2013 Rate Case. [23]

45. As of the date of retirement of the Coleman Station, Big Rivers will no longer accrue depreciation expenses related to the Coleman Station. Thus, Big Rivers requests approval to cease deferring the depreciation expense in the Coleman Station Depreciation regulatory asset as of the effective date of retirement, and it seeks recovery of that regulatory asset as set forth herein. As of December 31, 2019, the value of the Coleman Station Depreciation Deferral regulatory asset was approximately $37.2 million.

iii. Regulatory Asset

46. As of December 31, 2019, Big Rivers currently has on its books an approximately $140.4 million asset relating to the remaining net book value of the Coleman Station. However, in Big Rivers' pending 2020 ECP Case, Big Rivers seeks approval to replace and upgrade the existing FGD system and related equipment necessary for environmental compliance at Big Rivers' Wilson Station by utilizing FGD facilities presently in place at the Coleman Station. If the Commission approves recovery of Big Rivers moving the FGD system from the Wilson Station to the Coleman Station, removing the FGD system from the Coleman Station will reduce the value of the unrecovered net book value at the Coleman Station by approximately

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[22] *In the Matter of: Application of Big Rivers Electric Corporation for an Adjustment of Rates*, Order, P.S.C. Case No. 2012-00535, (Oct. 29, 2013), at 19, 32, 33.

[23] *In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period*, Order, P.S.C. Case No. 2013-00199, (Apr. 25, 2014), at 50.

$23.3 million. Accordingly, upon the retirement of the Coleman Station, Big Rivers would have to write off the approximately $117.1 million net book value of assets remaining at Coleman Station after the FGD system is removed absent approval from the Commission for Big Rivers to establish a regulatory asset to defer that expense. This write-off would result in Big Rivers having to recognize a one-time expense of approximately $117.1 million without the ability to recover it through its rates.

47. Big Rivers will also incur other expenses relating to the retirement of the Coleman Station, including but not limited to the decommissioning costs associated with closing the Coleman Station. These costs will include the actual costs for Big Rivers to remove materials and structures from the Coleman Station. However, Big Rivers will attempt to minimize these costs, including through the possible sale of the tangible assets at the Coleman Station, or reuse of the assets, if possible, as Big Rivers presently seeks to do by moving the FGD system at the Coleman Station to the Wilson Station.

48. The expenses Big Rivers will incur as a result of the retirement of the Coleman Station are not currently included in its rates, but Big Rivers believes that those expenses should be recoverable in the future (as amortization of the regulatory assets, including through the adoption of the New TIER Credit[24] and changes to the MRSM Rider sought below). Indeed, the retirement of the Coleman Station was necessitated due to the loss of the native load resulting from the smelters exiting Big

[24] Because the TIER Credit Big Rivers seeks to implement through this proceeding will replace the existing TIER Credit in its entirety, Big Rivers refers to the TIER Credit mechanism proposed in this proceeding as the "New TIER Credit."

Rivers' system, and the retirement of the Coleman Station, in conjunction with operation of the New TIER Credit proposed herein, is expected to provide the Members with cost savings associated with retirement of the Coleman Station.

49. To defer the expenses it will incur as a result of the retirement of the Coleman Station, Big Rivers needs the approval of both RUS and the Commission to establish a regulatory asset. Big Rivers' letter to RUS requesting its approval to establish a regulatory asset relating to the retirement of the Coleman Station, including the actual costs incurred related to retirement, such as decommissioning costs, is attached as Exhibit Smith-2 to the Testimony of Paul G. Smith. Big Rivers has been in frequent contact with RUS since it submitted its request for approval to RUS in December 2019, and expects RUS will act on Big Rivers' request prior to the conclusion of this proceeding. Big Rivers will provide the Commission with a copy of RUS's final action after it is received.

50. Accordingly, Big Rivers requests that the Commission authorize Big Rivers to establish a regulatory asset account for the approximately $117.1 million of unrecovered net book value of Big Rivers' investment at the Coleman Station (which assumes the Commission approves Big Rivers' plan to transfer the FGD System at the Coleman Station to the Wilson Station), and the actual costs Big Rivers incurs related to the retirement of the Coleman Station, such as the costs of decommissioning, subject to the approval of the same by RUS.[25]

[25] *See* 7 C.F.R. § 1767.13.

2. Establish Regulatory Assets for the Remaining Net Book Value of Reid Station Unit 1 and Other Costs Such as Decommissioning

i. Retirement

51. Reid Station Unit 1 was idled in April of 2016 because it was not in compliance with the Mercury and Air Toxics Standards ("MATS"), and the cost of bringing it into compliance with MATS would not have been economic given Big Rivers' load and cost projections. Since Reid Station Unit 1 was idled, energy and capacity prices in the competitive markets have not improved. Additionally, the idling of Reid Station Unit 1 has also exceeded the period allowed by MISO, and the interconnection rights at Reid Station Unit 1 have therefore terminated. The combination of uneconomic pricing and termination of interconnection rights essentially eliminates the financial viability of reenergizing Reid Station Unit 1.

52. Because Reid Station Unit 1 is not currently operational, Big Rivers will formally retire Reid Station Unit 1 following the entry of an Order in this proceeding granting the relief requested herein and RUS's approval of Big Rivers' request to create a regulatory asset related to the retirement of Reid Station Unit 1. Big Rivers will then promptly begin work to decommission Reid Station Unit 1.

ii. Regulatory Asset

53. As of December 31, 2019, Big Rivers currently has on its books an approximately $6 million asset relating to the remaining net book value of Reid Station Unit 1 that Big Rivers would have to write off upon the retirement of Reid Station Unit 1 absent approval from the Commission for Big Rivers to establish a

regulatory asset to defer that expense. This write-off would result in Big Rivers having to recognize a one-time expense of approximately $6 million, without the ability to recover it through rates.

54. Big Rivers will also incur other expenses relating to the retirement of Reid Station Unit 1, including but not limited to the decommissioning costs associated with closing Reid Station Unit 1. These costs will include the actual costs for Big Rivers to remove all materials and structures from the Reid Station Unit 1. However, Big Rivers will attempt to minimize these costs, including through the possible sale of the tangible assets at Reid Station Unit 1, or reuse of the assets, if possible, as Big Rivers presently seeks to do by moving the FGD system at the Coleman Station to the Wilson Station.

55. The expenses Big Rivers will incur as a result of the retirement of Reid Station Unit 1 are not currently included in its rates, but Big Rivers believes that those expenses should be recoverable in the future (as amortization of the regulatory assets, including through implementation of the New TIER Credit and MRSM Rider sought below). Indeed, the retirement of Reid Station Unit 1 was necessitated due to the unforeseen loss of the native load resulting from the smelters exiting Big Rivers' system, and the retirement of Reid Station Unit 1, in conjunction with operation of the New TIER Credit proposed herein, is expected to provide the Members with cost savings associated with retirement of Reid Station Unit 1.

56. To defer the expenses it will incur as a result of the retirement of Reid Station Unit 1, Big Rivers needs the approval of both the RUS and the Commission

to establish a regulatory asset. Big Rivers' letter to RUS requesting its approval to establish a regulatory asset relating to the retirement of Reid Station Unit 1, including the actual costs incurred related to retirement, such as decommissioning costs, is attached as Exhibit Smith-2 to the Testimony of Paul G. Smith. Big Rivers has been in frequent contact with RUS since it submitted its request for approval to RUS in December 2019, and expects RUS will act on Big Rivers' request prior to the conclusion of this proceeding. Big Rivers will provide the Commission with a copy of RUS's final action after it is received.

57. Accordingly, Big Rivers requests that the Commission authorize Big Rivers to establish a regulatory asset account for the approximately $6 million of unrecovered net book value of Big Rivers' investment at Reid Station Unit 1, and the actual costs Big Rivers incurs related to the retirement of Reid Station Unit 1, such as the costs of decommissioning, subject to the approval of the same by RUS.[26]

B. Regulatory Asset Treatment is Warranted

58. The authority of the Commission to allow utilities to establish regulatory assets "arises under the Commission's plenary authority to regulate utilities under KRS 278.040 and the Commission's authority to establish a system of accounts under KRS 278.220."[27]

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[26] 7 C.F.R. § 1767.13.

[27] *In the Matter of: The Application of East Kentucky Power Cooperative, Inc. for an Order Approving Accounting Practices to Establish a Regulatory Asset related to Certain Replacement Power Costs Resulting from Generation Forced Outages*, Order, P.S.C. Case No. 2008-00436 (Dec. 23, 2008), at p. 4.

59. The Commission has previously authorized jurisdictional utilities to establish regulatory assets under certain circumstances, as the Commission has explained:

> Historically, the Commission has exercised its discretion to approve regulatory assets where a utility has incurred: (1) an extraordinary, nonrecurring expense which could not have reasonably been anticipated or included in the utility's planning; (2) an expense resulting from a statutory or administrative directive; (3) an expense in relation to an industry sponsored initiative; or (4) an extraordinary or nonrecurring expense that over time will resulting in saving that fully offsets the cost.[28]

60. The Coleman Station retirement expenses that Big Rivers seeks to defer are extraordinary and nonrecurring expenses resulting from the overall decrease of Big Rivers' native system load (primarily caused by the unanticipated loss of the smelter loads). Further, retiring the Coleman Station now will result in cost savings to Big Rivers because it will allow Big Rivers to cease incurring the limited maintenance expenses associated with keeping the station idled and will also allow Big Rivers the greatest opportunity to mitigate the costs of decommissioning by attempting to sell the remaining marketable assets at Coleman Station at their highest value. Therefore, Big Rivers requests that the Commission allow Big Rivers to establish a regulatory asset to defer those expenses, thereby avoiding the otherwise immediate expense that would be associated with retirement, subject to RUS also

[28] *Id.*; *see also In the Matter of: Application of Louisville Gas and Electric Company for an Order Approving the Establishment of a Regulatory Asset,* Order, P.S.C. Case No. 2008-00456 (Dec. 22, 2008); *In the Matter of: Joint Application of Duke Energy Kentucky, Inc., Kentucky Power Company, Kentucky Utilities Company, and Louisville Gas and Electric Company for an Order Approving Accounting Practices to Establish Regulatory Assets and Liabilities Related to Certain Payments Made to the Carbon Management Research Group and Kentucky Consortium for Carbon Storage,* Order, P.S.C. Case No. 2008-00308 (Oct. 30, 2008).

approving the establishment of the regulatory asset. Big Rivers plans to recover the amount recorded in the regulatory asset through amortization of the regulatory asset over a period no longer than the expiration of the Member Contracts (at the end of 2043), as implemented through the adoption of the New TIER Credit and revisions to the MRSM Rider as requested in this Application.

61. Likewise, the Reid Station Unit 1 retirement expenses that Big Rivers seeks to defer are extraordinary and nonrecurring expenses resulting from the overall decrease of Big Rivers' native system load (primarily caused by the unanticipated loss of the smelter loads). Further, retiring Reid Station Unit 1 now will result in cost savings to Big Rivers because it will allow Big Rivers to cease incurring the limited maintenance expenses associated with keeping the station idled and will also allow Big Rivers the greatest opportunity to mitigate the costs of decommissioning by attempting to sell the remaining marketable assets at Reid Station Unit 1 at their highest value. Therefore, Big Rivers requests that the Commission allow Big Rivers to establish a regulatory asset to defer those expenses, thereby avoiding the otherwise immediate expense that would be associated with retirement, subject to RUS also approving the establishment of the regulatory asset. Big Rivers plans to recover the amount recorded in the regulatory asset through amortization of the regulatory asset over a period no longer than the expiration of the Member Contracts (at the end of 2043), as implemented through the adoption of the New TIER Credit and revisions to the MRSM Rider as requested in this Application.

VIII. REQUEST FOR APPROVAL TO RECOVER REGULATORY ASSETS, INCLUDING THOSE ESTABLISHED IN THIS PROCEEDING, THROUGH AMORTIZATION OF THE REGULATORY ASSETS

A. Background Explanation

62. In prior proceedings, the Commission approved Big Rivers' establishment of three regulatory assets related to the loss of the smelter load or Big Rivers' efforts to mitigate the loss of the smelter load by reducing uneconomic generation resources, and Big Rivers seeks the Commission's approval to establish additional regulatory assets in this proceeding as a result of those mitigation efforts (subject to RUS also approving the establishment of those regulatory assets), as well as recover the costs Big Rivers incurred to conduct the Focused Audit, pursuant to KRS 278.255(3).[29] All of these regulatory asset accounts, three of which have been previously approved, are collectively referred to herein as the "Smelter Loss Mitigation Regulatory Assets."

63. Specifically, the Smelter Loss Mitigation Regulatory Assets[30] include:

Name	Established	Approximate Balance as of 12/31/19
Station Two Retirement Costs	Case No. 2018-00146	$90.4 million
Coleman Station Depreciation Deferral	Case No. 2012-00535	$37.2 million
Wilson Station Depreciation Deferral	Case No. 2013-00199	$120.5 million

[29] "The commission shall include the cost of conducting any audits required in this section in the cost of service of the utility for ratemaking purposes." KRS 278.255(3).

[30] Big Rivers' request for recovery of the Coleman Station Regulatory Asset and Reid Station Unit 1 Regulatory Asset is subject to RUS's approval of Big Rivers' establishment of those regulatory assets.

Focused Management Audit Expenses	KRS 278.255(3)	$0.7 million
Coleman Station Regulatory Asset	*Requested Herein*	$117.1 million[31] + Actual Costs of Retirement, such as decommissioning costs
Reid Station Unit 1 Regulatory Asset	*Requested Herein*	$6 million + Actual Costs of Retirement, such as decommissioning costs

64. Big Rivers proposes to (in 2021) record a one-time amortization of the Smelter Loss Mitigation Regulatory Assets in the amount of eighty percent of the equity headroom in excess of the balance required by its syndicated bank facility. This amount would be used to directly and immediately reduce the balance of the Smelter Loss Mitigation Regulatory Assets, which, together with the New Tier Credit, will satisfy Big Rivers' commitment in the Station Two Case Settlement Agreement to "propose the reasonable and prudent utilization of its member equity in such a way as to best achieve the dual goals of: 1) minimizing member rates; and 2) improving its credit metrics to best achieve and maintain an investment grade credit rating."[32]

[31] The approximate balance of the unrecovered net book value of the Coleman Station as of December 31, 2019 is $140.4 million, but is expected to decrease to $117.1 million if the Commission approves Big Rivers' request to move the FGD system from the Coleman Station to the Wilson Station in the pending 2020 ECP Case.

[32] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset,* Motion for Leave to File Settlement Agreement, Stipulation, and Recommendation and Supporting Testimony, P.S.C. Case No. 2018-00146, (Oct. 22, 2018), Settlement Agreement, at ¶ 5 (". . . Big Rivers will propose the reasonable and prudent utilization of its member equity in such a way as to best achieve the dual goals of: 1) minimizing member rates; and 2) improving its credit metrics to best achieve and maintain an investment grade credit rating." (emphasis added)).

65. Big Rivers estimates that this one-time amortization will reduce the total balance of the Smelter Loss Mitigation Regulatory Assets by approximately $91 million.

66. Big Rivers further seeks approval to recover the remainder of the Smelter Loss Mitigation Regulatory Assets without a change to base rates. Instead, Big Rivers seeks to recover the remainder of the Smelter Loss Mitigation Regulatory Assets through existing rates by amortizing each established regulatory asset over a term no longer than the expiration of the Members' all-requirements contracts, which terminate on December 31, 2043, beginning with calendar year 2021.

67. Big Rivers will amortize the regulatory assets using a levelized annual amortization schedule from 2021 through 2043, which will result in the Smelter Loss Mitigation Regulatory Assets being projected to be amortized in an equal amount annually from 2021 to 2043, or, in the case of any future costs, amortized annually in an equal amount from the year in which the expense was incurred to 2043. This budgeted amortization may be increased or decreased through application of the New TIER Credit.

68. As is illustrated by Exhibit Smith-7 to the Testimony of Paul G. Smith, Big Rivers believes that amortization of the Smelter Loss Mitigation Regulatory Assets over a period no longer than expiration of the Members' current contracts will allow Big Rivers to fully recover the Smelter Loss Mitigation Regulatory Assets while minimizing the need to seek a future base rate increase for the duration of the Members' all-requirement contracts.

69. Finally, Big Rivers proposes the New TIER Credit. While discussed in more detail below, the New TIER Credit will further reduce the balance of the Smelter Loss Mitigation Regulatory Assets when Big Rivers' year-end TIER exceeds 1.30. Big Rivers believes this could result in full amortization of the Smelter Loss Mitigation Regulatory Assets prior to expiration of the Members' Contracts, thereby decreasing the chance that Big Rivers may be forced to seek recovery of the Smelter Loss Mitigation Regulatory Assets through a base rate increase in the future.

70. Recovery of the Smelter Loss Mitigation Regulatory Assets is a crucial step to restoring an investment grade credit rating, which will fulfill a primary goal recognized in the Station Two Case Settlement Agreement.[33] In fact, as is fully set forth in the Testimony of Robert W. Berry, the credit ratings agencies have indicated that a lack of regulatory support for cost recovery of Big Rivers' assets could be a credit challenge that would inhibit Big Rivers' ability to achieve an investment grade credit rating.

B. Regulatory Assets to Be Recovered Through Amortization.

1. Pre-Existing Regulatory Assets & Focused Audit Expenses

i. Station Two Regulatory Asset

71. The first group of regulatory assets for which Big Rivers seeks recovery are pre-existing regulatory assets or expenses approved in prior Commission cases.

72. In the Station Two Case, the Commission authorized Big Rivers to establish the Station Two Regulatory Asset, which allowed Big Rivers to defer the

[33] *Id.* (emphasis added).

expenses related to the remaining value of the Station Two contracts with the City of Henderson and the Henderson Utility Commission at the time the Station Two Contracts were terminated.[34]

73. In the Station Two Case Settlement Agreement, the Attorney General and KIUC agreed to "support Big Rivers' request for rate recovery of the Station Two Regulatory Asset amortization." Big Rivers agreed the amortization period would be no longer than through the end of its "all-requirements" contracts with its Members.[35]

74. Accordingly, Big Rivers respectfully requests that the Commission authorize Big Rivers to amortize the Station Two Regulatory Asset approved in Case No. 2018-00146, over a period no longer than the length of the all-requirements contracts between Big Rivers and its Members, which expire on December 31, 2043.

ii. Depreciation Deferral at the Coleman Station

75. In the 2012 Rate Case, the Commission determined that the depreciation expense associated with the Coleman Station should be excluded from recovery in Big Rivers' base rates and granted Big Rivers authorization to establish a regulatory asset for the depreciation expense associated with the Coleman

[34] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset,* Order, P.S.C. Case No. 2018-00146, (Oct. 23, 2018).

[35] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset,* Motion for Leave to File Settlement Agreement, Stipulation, and Recommendation and Supporting Testimony, P.S.C. Case No. 2018-00146, (Oct. 22, 2018), Settlement Agreement, at ¶ 4.

Station.[36] The Commission ordered Big Rivers to continue deferring those depreciation expenses into a regulatory asset in the 2013 Rate Case.[37]

76. The Commission further explained its intent as follows: "It is the Commission's intent that the amount recorded as a deferred asset will be considered for amortization at some future point in time if and when the facility is needed to serve customers, is sold, or is permanently closed."[38]

77. In the Station Two Case Settlement Agreement, KIUC agreed to "support Big Rivers' request for rate recovery of the Coleman Regulatory Asset amortization," which Big Rivers agreed to amortize over a period no longer than through the end of its all-requirements contracts with its Members.[39]

78. Accordingly, Big Rivers respectfully requests that the Commission authorize Big Rivers to amortize the Coleman Station regulatory asset approved in the 2012 Rate Case (and continued in the 2013 Rate Case), over a period no longer than the length of the all-requirements contracts between Big Rivers and its Members, which expire on December 31, 2043.

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[36] *In the Matter of: Application of Big Rivers Electric Corporation for an Adjustment of Rates*, Order, P.S.C. Case No. 2012-00535, (Oct. 29, 2013), at 19, 32, 33.

[37] *In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period*, Order, P.S.C. Case No. 2013-00199, (Apr. 25, 2014), at 50.

[38] *Id.* at 33.

[39] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset*, Motion for Leave to File Settlement Agreement, Stipulation, and Recommendation and Supporting Testimony, P.S.C. Case No. 2018-00146, (Oct. 22, 2018), Settlement Agreement, at ¶ 4.

iii. Depreciation Deferral at the Wilson Station

79. As is explained fully above, in the 2013 Rate Case, the Commission ordered that "[e]ffective February 1, 2014, Big Rivers should defer the depreciation on the Wilson Station in a regulatory asset account rather than record that depreciation as an expense. It should continue to credit depreciation on the Wilson Station to its accumulated depreciation, or depreciation reserve, account."[40]

80. In the Station Two Case Settlement Agreement, KIUC agreed to "support Big Rivers' request for rate recovery of the Wilson Regulatory Asset amortization, net of the reasonable and prudent utilization of member equity,"[41] which Big Rivers agreed the amortization period would be no longer than through the end of its all-requirements contracts with its Members.[42]

81. Additionally, the Attorney General agreed to "support rate recovery of the Wilson Regulatory Asset amortization and Wilson's on-going depreciation expense and fixed operating costs if in Big Rivers' next base rate case, the proposed annual impact on Big Rivers' Rural and Large Industrial classes is 0% or less as compared to current rates."[43]

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[40] *Id.* at 50.

[41] As stated in Paragraph 64 above, consistent with the Station Two Case Settlement Agreement, Big Rivers seeks to utilize a portion of its Member equity to reduce the balance of the Smelter Loss Mitigation Regulatory Assets.

[42] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset*, Motion for Leave to File Settlement Agreement, Stipulation, and Recommendation and Supporting Testimony, P.S.C. Case No. 2018-00146, (Oct. 22, 2018), Settlement Agreement, at ¶ 4.

[43] *Id.* at ¶ 7.

82. As is discussed below, through operation of the New TIER Credit and the revised MRSM Rider, Big Rivers' proposal in this proceeding will have a proposed annual impact of 0% or less as compared to current rates insofar as Big Rivers does not seek to increase its base rates.

83. Accordingly, Big Rivers respectfully requests that the Commission authorize Big Rivers to amortize the Wilson Station regulatory asset approved in Case No. 2013-00199, over a period no longer than the length of the all-requirements contracts between Big Rivers and its Members, which expire on December 31, 2043.

iv. Focused Management Audit Expenses

84. In the 2013 Rate Case, the Commission exercised its authority set forth in KRS 278.255 and ordered that Big Rivers be subject to the Focused Audit to review Big Rivers' efforts to mitigate the impact of the loss of the smelter loss. Pursuant to KRS 278.255(3), "[t]he commission shall include the cost of conducting any audits required in this section in the cost of service of the utility for ratemaking purposes."

85. Accordingly, Big Rivers respectfully requests that the Commission authorize Big Rivers to amortize the Focused Audit expenses over a period no longer than the length of the all-requirements contracts between Big Rivers and its Members, which expire on December 31, 2043.

2. Proposed Regulatory Assets

i. Regulatory Assets Related to the Costs Associated with the Retirement of the Coleman Station, including (a) the Unrecovered Net Book Value and (b) other actual costs, such as Decommissioning

86. In addition to the recovery of the preceding expenditures, Big Rivers also proposes to begin recovery of the proposed regulatory assets.

87. First, subject to RUS approval, Big Rivers seeks authorization to establish a regulatory asset for the unrecovered net book value of the Coleman Station at the time of retirement, as well as for the additional actual costs associated with retiring and decommissioning the Coleman Station, which will be mitigated by Big Rivers' attempts to reuse or salvage the materials and structures at the Coleman Station.

88. If approved, Big Rivers also respectfully requests that the Commission authorize Big Rivers to amortize this regulatory asset over a period no longer than the length of the all-requirements contracts between Big Rivers and its Members, which expire on December 31, 2043.

ii. Regulatory Assets Related to the Costs Associated with the Retirement of Reid Station Unit 1, including (a) the Unrecovered Net Book Value and (b) other actual costs, such as Decommissioning

89. Subject to RUS approval, Big Rivers also seeks authorization to establish a regulatory asset for the unrecovered net book value of Reid Station Unit 1 at the time of retirement, as well as for the additional costs associated with retiring and decommissioning Reid Station Unit 1, which will be mitigated by Big Rivers' attempts to reuse or salvage the materials and structures at Reid Station Unit 1.

90. If approved, Big Rivers also respectfully requests that the Commission authorize Big Rivers to amortize this regulatory asset over a period no longer than the length of the all-requirements contracts between Big Rivers and its Members, which expire on December 31, 2043.

IX. REQUEST FOR APPROVAL OF REVISED MRSM TARIFF

91. In order to implement these proposals and to facilitate the immediate transfer of benefits to its Members, Big Rivers proposes to amend its MRSM Rider, which was last modified in Case No. 2018-00146, to simplify and stabilize the rates charged to Big Rivers' Members through operation of a rate credit (the "New TIER Credit").

92. A copy of the revised MRSM Rider, with a proposed effective date of March 30, 2020 is attached to the Testimony of Paul G. Smith as Exhibit Smith-4.[44] The tariff changes are subject to the approval of RUS.

93. As is illustrated in Exhibit Smith-6 to the Testimony of Paul G. Smith, Big Rivers projects that the New TIER Credit and the revisions to the MRSM Rider will result in the effective rates to Big Rivers' Members in 2021 being less than they would under the current MRSM Rider.[45] Because Big Rivers is proposing to begin recovering the Smelter Loss Mitigation Regulatory Assets through existing rates, and to use half of its excess margins to increase the amortization of those assets in any

[44] The Current MRSM Rider and billing formats and a redline of the MRSM Rider and billing formats are also attached to the Testimony of Paul G. Smith as Exhibits Smith-3 and Smith-5, respectively.

[45] The New TIER Credit will not apply to sales to Big Rivers' Members' customers operating under Big Rivers' economic development incentive rate or to which Big Rivers' Fuel Adjustment Clause is inapplicable, as the MRSM Rider does not currently apply to such entities.

year its TIER would exceed a 1.30, in some years, the New TIER Credit may produce MRSM credits less than would exist under the existing MRSM mechanism. However, even in years where the MRSM credits are slightly lower than what would be provided by the existing MRSM mechanism, Big Rivers' proposal still benefits Big Rivers' Members by enabling Big Rivers to fully amortize the Smelter Loss Mitigation Regulatory Assets (i.e., to pay for the approximately $371.9 million in costs associated with plants that have not been fully depreciated or for depreciation expense that has been deferred) without increasing base rates.

94. For every calendar year from 2020 through the end of the Members' all-requirements contracts in 2043, Big Rivers proposes to utilize all net margins that Big Rivers earns above the margins that would result in Big Rivers achieving a TIER of 1.30 – which is the TIER approved by the Commission in the 2013 Rate Case – to benefit Big Rivers' Members through (1) a monthly credit and (2) increased amortization of the Smelter Loss Mitigation Regulatory Asset balance. (For the purposes of determining the New TIER Credit, Big Rivers will calculate its year-end TIER excluding any and all expenditures on "promotional advertising," "political advertising," and "institutional advertising" as those terms are defined in 807 KAR 5:016, lobbying costs, and donations.)

95. The current MRSM Rider contains a multitude of accounts allocated in various manners that are designed to return a portion of Big Rivers' margins to its Members, including a portion of the margins Big Rivers earns as a result of its successes in implementing its Mitigation Plan. The Commission's order approving

the Station Two Case Settlement Agreement, for example, authorized Big Rivers to establish a TIER Credit (the "Station Two TIER Credit") based upon a 1.45 TIER threshold to reduce the Smelter Loss Mitigation Regulatory Assets based upon other savings resulting from the termination of the Station Two Contracts. The New TIER Credit would work in a similar manner (albeit with a lower TIER threshold), and it would replace the Station Two TIER Credit and the various accounts in the current MRSM Rider.

A. Mechanics of the New TIER Credit

96. Under the proposed revisions to the MRSM Rider, starting in approximately February 2021, all of Big Rivers' Margins will be treated the same, and a single, simplified mechanism (the New TIER Credit) will be used to return net margins in excess of the net margins that would result in a 1.30 TIER to the Members.

97. Indeed, in an attempt to make the MRSM Rider simplified for Big Rivers' Members, Big Rivers is proposing to eliminate the multiple investment accounts included in the current MRSM Rider, including the net margins from the Nebraska Contracts and the Hawesville contracts. In the year 2020, Big Rivers proposes to stop accruing the Demand Side Management ("DSM") regulatory liability. This will allow all of Big Rivers' revenues to be accounted for in its year-end TIER calculation, rather than being treated separate and distinct from other revenues. It will also allow Big Rivers to distribute its net margins above a 1.30 TIER in accordance with the revenue received for the calendar year in which the net margins were earned. This will ensure that the Rural class and the Large Industrial class

receive a credit in proportion to the amount each contributed to Big Rivers' net margins above a 1.30 TIER.

98. The currently-accrued DSM regulatory liability of approximately $700,000 will be immediately utilized to reduce the balance of the Smelter Loss Mitigation Regulatory Assets; and beginning in the year 2020, this former regulatory liability will simply be ordinary revenues that factor into the TIER calculation for determining the Members' New TIER Credit.

99. Under the revised MRSM tariff, Big Rivers' year-end TIER will be calculated annually. Any TIER Credit due to the Members will be applied in equal monthly installments over the following twelve months. The proposed revisions to the New TIER Credit and MRSM Rider have been proposed to ensure that Big Rivers' Members will not see a lag in any credits owed under the MRSM Rider during the transition from the existing mechanism to the New TIER Credit. Rather, the Members will have the opportunity to be provided one continuous credit – the mechanics of how the monthly credit is earned will simply shift from the old, complicated MRSM Rider to the new, simplified MRSM Rider proposed in this proceeding.

100. When Big Rivers' year-end TIER exceeds 1.30, the New TIER Credit will provide both a short-term and long-term benefit to Big Rivers' Members. Fifty-percent of the net margins above a 1.30 TIER will be disbursed to the Members in the form of a bill credit, which will be distributed monthly through operation of Big Rivers' MRSM Rider. The remaining fifty-percent of the net margins above a 1.30

TIER will be utilized to reduce the amortized balance of the Smelter Loss Mitigation Regulatory Assets.

101. In the event that Big Rivers' year-end TIER is below 1.30, Big Rivers would reduce the amortization expense to bring its TIER to 1.30. Therefore, even when Big Rivers' TIER is equal to or below 1.30, the Members will still receive a long-term benefit through the continued amortization of the Smelter Loss Mitigation Regulatory Assets, albeit at a reduced rate.

102. If operation of the New TIER Credit results in the Smelter Loss Mitigation Regulatory Assets being amortized prior to the expiration of the Members' Contracts, then 100% of the net margins above 1.30 TIER will be disbursed to Big Rivers' Members as a monthly bill credit in accordance with the MRSM Rider, further reducing the rates charged to Big Rivers' Members.

103. If approved by the Commission, Big Rivers will provide the Commission with the calculation of its year-end TIER and the amount of net margins that flow through the MRSM Rider as a credit to Big Rivers' Members, if any, and the amount by which Big Rivers will amortize the Smelter Loss Mitigation Regulatory Assets no later than February 28 of each calendar year.

104. As explained in the Testimony of Paul G. Smith, a TIER of 1.30 is appropriate and reasonable. It will help ensure that Big Rivers is able meet the revenue requirements necessary to satisfy the financial covenants in its loan agreements, thereby mitigating against the risk of future rate increases. Furthermore, the New TIER Credit will ensure that, to the extent that Big Rivers

exceeds the TIER authorized in its last rate case, Big Rivers' Members will receive a bill credit, as well as accelerated amortization of the Smelter Loss Mitigation Regulatory Assets. Continued regulatory support for this modest TIER should also aid Big Rivers' efforts to regain its investment grade credit ratings. Finally, Big Rivers' reports of its year-end TIER calculations and New TIER Credit flow-throughs by February 28 of each year will also help the Commission monitor Big Rivers' ongoing dedication to successful emergence from the difficulties of the smelter departures.

105. Accordingly, the proposed New TIER Credit and revisions to the MRSM Rider will allow Big Rivers' Members to receive the benefit of Big Rivers' aggressive pursuit of the Mitigation Plan, while simultaneously stabilizing rates and ensuring that Big Rivers can maintain the financial metrics required by its loan documents and regain its investment grade credit ratings.

WHEREFORE, Big Rivers requests an Order from the Commission:

1. Declaring the Wilson Station "used and useful" and authorizing Big Rivers to cease deferring depreciation expenses related to the Wilson Station;

2. Authorizing the establishment of regulatory assets for unrecovered net book value of the Coleman Station, and the actual other costs incurred as a result of the retiring and decommissioning of the Coleman Station; and the unrecovered net book value of Reid Station Unit 1, and the actual other costs incurred as a result of retiring and decommissioning Reid Station Unit 1, subject to RUS also approving the same;

3. Authorizing the amortization of the Smelter Loss Mitigation Regulatory Assets, over a period no longer than December 31, 2043, which is the expiration date of the Members' all-requirements contracts;

4. Approving the creation of the New TIER Credit described herein and the proposed revisions to Big River's Member Rate Stability Mechanism tariff; and

5. Granting Big Rivers all other relief to which it may appear entitled.

Respectfully submitted,

BIG RIVERS ELECTRIC CORPORATION

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Henderson, Kentucky 42419-0024
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Email: tyson.kamuf@bigrivers.com
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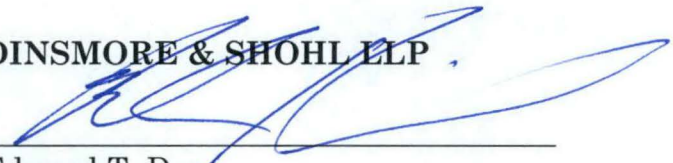
DINSMORE & SHOHL LLP



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Counsel to Big Rivers Electric Corporation

16085034.1

BIG RIVERS ELECTRIC CORPORATION

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. 2020-00_____

VERIFICATION

I, Robert W. ("Bob") Berry, Vice President, Production for Big Rivers Electric Corporation, hereby state that I have read the foregoing Application and that the statements contained therein are true and correct to the best of my knowledge and belief, on this the 28th day of February, 2020.

Robert W. Berry

Robert W. ("Bob") Berry
President and Chief Executive Officer
Big Rivers Electric Corporation

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Robert W. ("Bob") Berry on this the 28th day of February, 2020.

Katherine Risley

Notary Public, Kentucky State at Large
My Commission Expires October 31, 2020

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, ESTABLISH REGULATORY ASSETS, AMORTIZE REGULATORY ASSETS, AND OTHER APPROPRIATE RELIEF	)))))))	**Case No. 2020-00____**

CERTIFICATE OF NOTICE TO THE PUBLIC

To the Public Service Commission, Frankfort, Ky.

Pursuant to the Rules Governing Tariffs (effective June 2, 1982), I hereby certify that I, Roger D. Hickman, Regulatory Affairs Manager for Big Rivers Electric Corporation (the "Company"), a utility furnishing wholesale electric service within the Commonwealth of Kentucky, which on the 28th day of February, 2020, filed with the Kentucky Public Service Commission an application seeking approval, among other things, to cease deferring depreciation expenses, to establish and amortize regulatory assets, and to modify the Company's MRSM tariff currently on file with the Commission. The modification of Big Rivers' MRSM tariff will impact the MRSM amount appearing on the Company's bills. I further certify that notice to the public of the filing of the Company's application has been given in all respects as required by Section 8 of 807 KAR 5:011, as follows:

On the 28th day of February, 2020, the attached notice was posted at the Company's place of business, 201 Third Street, Henderson, Kentucky 42420, and will be kept open to public inspection in conformity with the requirements of Section 8 of 807 KAR 5:011.

On the 28th day of February, 2020, the attached notice, and a hyperlink to the location on the Public Service Commission's web site where the tariff filing will be available, were posted on the Company's website, www.bigrivers.com, and will remain posted in conformity with the requirements of Section 8 of 807 KAR 5:011.

On the 28th day of February, 2020, the attached typewritten notice was mailed to each of the three customers of the Company.

Given under my hand this the 28th day of February, 2020.

Roger D. Hickman
Regulatory Affairs Manager
Big Rivers Electric Corporation

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Roger D. Hickman as Regulatory Affairs Manager for Big Rivers Electric Corporation on this the 28th day of February, 2020.

Notary Public, Kentucky State at Large

My Commission Expires 2/22/22

Notary ID: 594036

Big Rivers
ELECTRIC CORPORATION

201 Third Street
P.O. Box 24
Henderson, KY 42419-0024
270-827-2561
www.bigrivers.com

February 28, 2020

Mr. Gregory H. Grissom
President and CEO
Jackson Purchase Energy Corporation
2900 Irvin Cobb Drive, P. O. Box 4030
Paducah, KY 42002-4030

Mr. Jeffrey A. Hohn
President and CEO
Kenergy Corp.
3111 Fairview Drive, P. O. Box 1389
Owensboro, KY 42302-1389

Mr. Martin W. Littrel
President and CEO
Meade County RECC
1351 Hwy. 79, P. O. Box 489
Brandenburg, KY 40108-0489

Re: *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. 2020-00_____*

Gentlemen:

Big Rivers Electric Corporation ("Big Rivers") hereby provides notice that, on this date, it has filed with the Kentucky Public Service Commission in the above-referenced matter an application for approval, among other things, to cease deferring depreciation expenses, to establish and amortize regulatory assets, and to modify Big Rivers' MRSM tariff currently on file with the Commission. The modification of Big Rivers' MRSM tariff will impact the MRSM amount appearing on Big Rivers' bills.

A copy of the application, including the Direct Testimonies of Robert W. Berry and Paul G. Smith, is enclosed. Big Rivers proposes to modify its MRSM tariff to include an annual TIER Credit as defined in the proposed tariff. These tariff changes, as proposed, would be effective March 30, 2020, but the current MRSM bill credit will continue to be applied through the December 2020 service month. The estimated incremental impact per customer class, in both dollars and as a percent, resulting from these changes; the present rates under the current MRSM tariff and the proposed rates under the proposed MRSM tariff per customer class; and the amount of

average usage and effect on the average bill per customer class are shown on the enclosed schedule.

A person may examine Big Rivers' application at the offices of Big Rivers located at 201 Third Street, Henderson, Kentucky 42419, or at the Public Service Commission's offices located at 211 Sower Boulevard, Frankfort, Kentucky, Monday through Friday, 8:00 a.m. to 4:30 p.m., or through the Commission's web site at http://psc.ky.gov. Comments regarding the filing may be submitted to the Public Service Commission through its web site or by mail to Public Service Commission, Post Office Box 615, Frankfort, Kentucky 40602.

The rates contained in this notice are the rates proposed by Big Rivers but the Public Service Commission may order rates to be charged that differ from the proposed rates contained in this notice. A person may submit a timely written request for intervention to the Public Service Commission, Post Office Box 615, Frankfort, Kentucky 40602, establishing the grounds for the request including the status and interest of the party. If the Commission does not receive a written request for intervention within thirty (30) days of the initial mailing of this notice, the Commission may take final action on the filing.

Sincerely yours,

Tyson Kamuf
Corporate Attorney

Enclosures

cc: Hon. Mark David Goss
Hon. J. Christopher Hopgood
Hon. Thomas C. Brite

Big Rivers Electric Corporation
Case No. 2020-00_____
Estimated Member Billing Impact

Rate Class	2021 Forecast Annual Usage (MWh)	2021 Forecast Annual Revenue ($000s)	2021 Forecast Annual Rate ($/MWh)	2021 As Adjusted for New TIER Credit 50% New TIER Credit ($000s)	Rate Decrease ($/MWh)	New Rate ($/MWh)	New Billings ($000s)	Annual Decrease ($000s)	Annual Decrease (%)	Monthly Impact Usage (MWh)	Revenue ($000s)	Rate Decrease (%)
Rurals - RDS Tariff Schedule	2,282,302	$ 195,232	$ 85.54	$ (2,480)	$ (1.09)	$ 84.46	$ 192,752	$ (2,480)	-1.27%	190,192	$ (207)	-1.27%
Large Industrials LIC Tariff Schedule	939,183	60,552	$ 64.47	(730)	$ (0.78)	$ 63.70	59,822	(730)	-1.21%	78,265	$ (61)	-1.21%
		$ 255,784		$ (3,210)			$ 252,574	$ (3,210)				

Case No. 2020-00_____
Exhibit Smith-6
Direct Testimony of Paul G. Smith
Page 1 of 1

Big Rivers Electric Corporation
Case No. 2020-00_____
Tariff Filing and Accounting Case
Proposed Procedural Schedule

Action	
Application Filed	Friday, February 28, 2020
Intervention Deadline	Friday, March 13, 2020
Informal Conference	Wednesday, March 18, 2020
Initial Data Requests to Big Rivers	Monday, March 23, 2020
Big Rivers' Responses to Initial Data Requests	Monday, April 06, 2020
Intervenors' Testimonies Due	Thursday, April 16, 2020
Data Requests to Intervenors	Monday, April 27, 2020
Intervenors' Responses to Data Requests	Monday, May 11, 2020
Big Rivers' Rebuttal Testimony	Wednesday, May 20, 2020
Informal Conference (***if necessary***)	Friday, May 22, 2020
Hearing (***if necessary***)	Wednesday, May 27, 2020
Post-Hearing Briefs (***if necessary***)	Wednesday, June 03, 2020
PSC Order no later than -	Tuesday, June 30, 2020

BIG RIVERS ELECTRIC CORPORATION
Book Depreciation Accrual Rate Study
At December 31, 2018

BIG RIVERS ELECTRIC CORPORATION
DEPRECIATION RATE STUDY
AT DECEMBER 31, 2018

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PURPOSE

The purpose of this study is to develop functional depreciation rates for the depreciable Production, Transmission, and General Property as recorded on the books of Big Rivers Electric Corporation ("BREC" or "Company") as of December 31, 2018. The depreciation rates were designed to recover the total remaining undepreciated investment, adjusted for net salvage, over the remaining life of BREC's property on a straight-line basis. Non-depreciable property and property that is amortized were excluded from this study.

BREC is a member-owned, not-for-profit, generation and transmission cooperative (G&T) headquartered in Henderson, Kentucky. BREC provides wholesale electric power and services to three distribution cooperative members across 22 counties in western Kentucky. The member cooperatives are Jackson Purchase Energy Corporation, Kenergy Corporation, and Meade County Rural Electric Cooperative Corporation. Assets for BREC at December 31, 2018 include: 1,444 megawatts of owned generation capacity, with a total power capacity of 1,819 megawatts after including rights to Henderson Municipal Power and Light's (HMP&L) Station Two (retired in 2019 and excluded from the depreciation study) and contracted capacity from the Southeastern Power Administration (SEPA); 68.40 conductor miles of 345 kV transmission lines with supporting structures; 363.10 conductor miles of 161 kV transmission lines with supporting structures; 14.40 conductor miles of 138 kV transmission line with supporting structures; 852.10 conductor miles of 69 kV line and 24 transmission substations. In addition, BREC uses associated equipment such as feeders, primary switches, poles, and conductor to serve its cooperative members.

General Property assets such as buildings, office furniture, transportation equipment, and other miscellaneous property are located throughout BREC's service territory.

STUDY RESULTS

Recommended depreciation rates for all BREC depreciable property are shown in Appendix A. These rates translate into an annual depreciation accrual (total company) for Production of $38.90 million and Transmission and General Property plant of $7.75 million, for a total of $46.65 million. These accruals are based on Big Rivers' depreciable investment as of December 31, 2018 as shown in Appendix B. The annual depreciation expense calculated by the same method using the existing approved BREC depreciation rates was $37.29 million for Production and $9.45 million for Transmission and General Property plant, for a total of $46.74 million. This represents a decrease of $90 thousand over existing depreciation accrual rates. Appendix B shows the effect of the change in lives and curves on depreciation accrual by account. The proposed lives and curves on which these calculations are based are shown in Appendix C. Appendix D shows the Production unit retirement dates. Appendix E addresses the development of net salvage parameters for all plant accounts.

Since Kentucky Case No. 2013-00199, BREC has been using its existing depreciation rates. In this proceeding, BREC is presenting updated estimates of life and net salvage for all accounts. This study makes changes in the depreciation methodology used in the last depreciation study. The existing depreciation rates incorporate life span for Production and Transmission assets and whole life depreciation rates for General assets. This study recommends moving to the remaining life depreciation system for all accounts. For Production and other plant, this study recommends interim retirement curves to model retirement of assets before the terminal retirement date of each generating station.

For General plant Accounts 391, 393-395, and 397-398, Alliance Consulting Group recommends the implementation of vintage group amortization.

This study makes the following recommendations for BREC going forward:

1. Create a standardized retirement unit listing that can be used by Company field and operations personnel.
2. Adopt remaining life depreciation rates for all depreciable accounts.
3. Adopt the use of interim retirement curves to model Production and Other Production assets prior to a generating unit's terminal retirement date.
4. Adopt depreciable accrual rates for Production accounts by account and

location.

5. Stratify account 391.2 into the following subgroups: A. Network Equipment; B. PCs, Servers, Printers, Etc.; C. Non-Enterprise Software, and D. Enterprise Software.
6. Adopt general plant amortization for accounts: 391.0/391.6/391.7, 391.2, 393-395, 397-398.
7. Adopt depreciation accrual rates as shown in Appendix B.

GENERAL DISCUSSION

Definition

The term "depreciation" as used in this study is considered in the accounting sense; that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. BREC accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. At retirement, the net cost of depreciable property (original cost less accumulated depreciation), less the net salvage value, is charged to the depreciation reserve (deferred gain/loss).

Basis of Depreciation Estimates

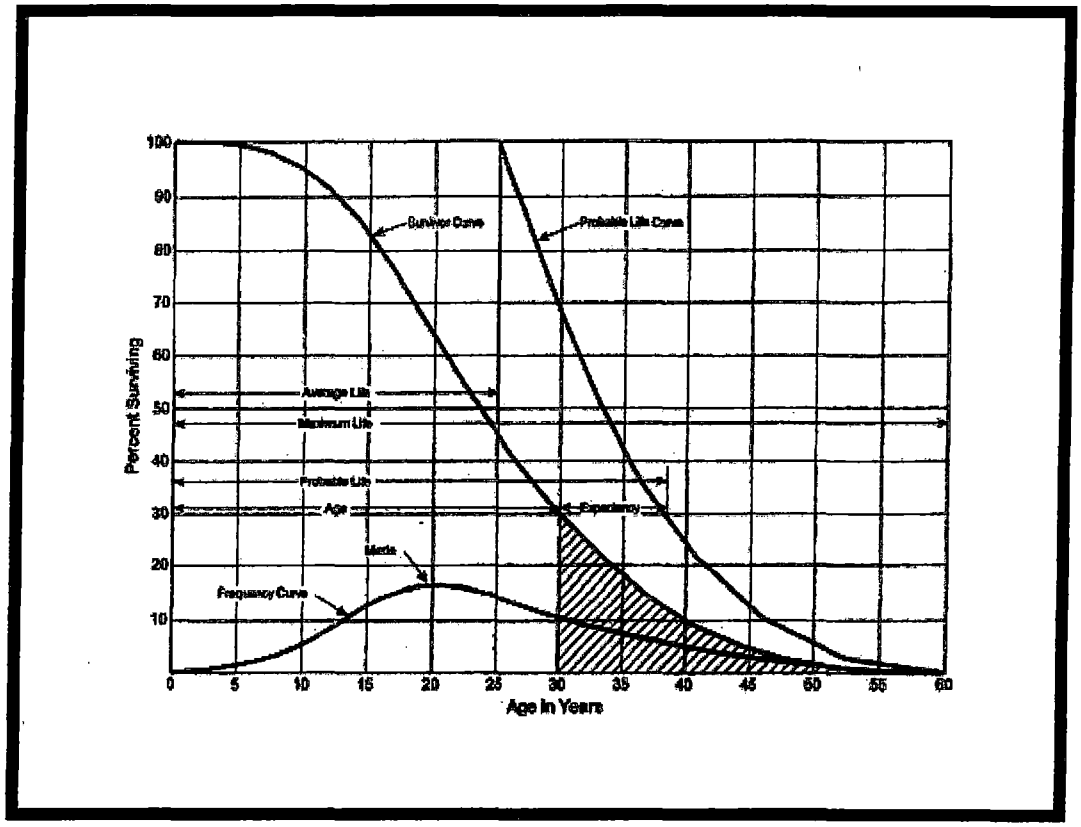
Annual and accrued depreciation rates were calculated in this study by the straight-line, broad group, remaining-life depreciation system. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset group less allocated book reserve (accumulated depreciation) less estimated net salvage by its respective average remaining life. The resulting annual accrual amounts of all depreciable property within a function were accumulated and the total was divided by the original cost of all functional depreciable property to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group, and were computed in a direct weighting by multiplying each vintage or account balance times its remaining life and dividing by the plant investment in service as of December 31, 2018. The computations of the annual functional depreciation rates and the weighted remaining life are shown in Appendix A.

Actuarial analysis is a commonly used mortality analysis technique for electric utility property. Since vintaged information is available, actuarial analysis was performed.

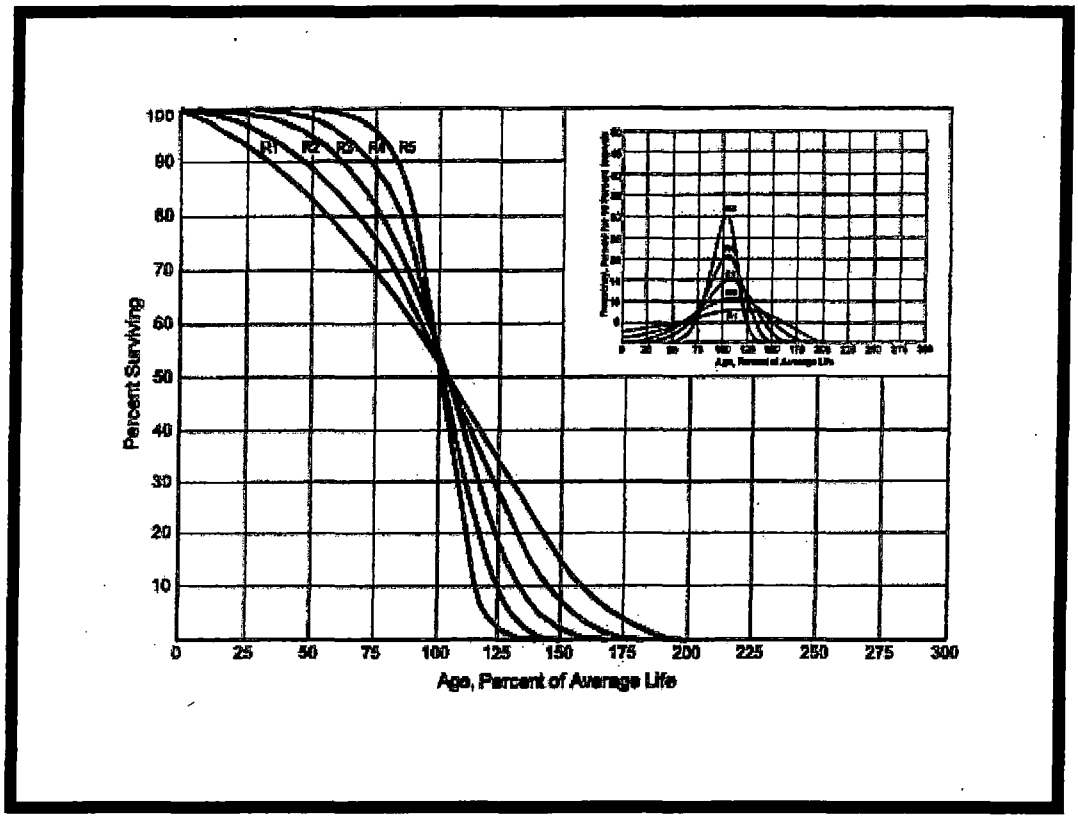
Judgment was used on all accounts. Each approach used in this study is more fully described in a later section.

Survivor Curves

To fully understand depreciation projections in a regulated utility setting, there must be a basic understanding of survivor curves. Individual assets within a group do not normally have identical lives or investment amounts. The average life of a group can be determined by comparing actual experience against various survivor curves. A survivor curve represents the percentage of property remaining in service at various age intervals. The most widely used set of representative survivor curves are the Iowa Survivor Curves ("Iowa Curves"). The Iowa Curves are the result of an extensive investigation of life characteristics of physical property made at the Iowa State College Engineering Experiment Station in the first half of the twentieth century. Through common usage, revalidation, and regulatory acceptance, these curves have become a descriptive standard for the life characteristics of industrial property. An example of an Iowa Curve is shown below.



There are four families in the Iowa Curves, which are distinguished by the relation of the age at the retirement mode (largest annual retirement frequency) and the average life. The four families are designated as "R"— Right, "S" — Symmetric, "L" — Left, and "O" — Origin Modal. First, for patterns with the mode age greater than the average life, an "R" designation (*i.e.*, Right modal) is used. The family of "R" moded curves is shown below.



Second, an "S" designation (*i.e.*, Symmetric modal) is used for the family whose mode age is symmetric about the average life. Third, an "L" designation (*i.e.*, Left modal) is used for the family whose mode age is less than the average life. Fourth, a special case of left modal dispersion is the "O" or origin modal curve family. Within each curve family, numerical designations are used to describe the relative magnitude of the retirement frequencies at the mode. A "6" indicates that the retirements are not greatly dispersed from the mode (*i.e.*, high mode frequency) while a "1" indicates a large dispersion about the mode (*i.e.*, low mode frequency). For example, a curve with an average life of 30 years and an "L3" dispersion is a moderately dispersed, left modal curve that can be designated as a 30 L3 Curve. An SQ, or square, survivor curve occurs where no dispersion is present (*i.e.*, units of common age retire simultaneously).

For Production interim retirement curves, Transmission, and General Property accounts, a survivor curve pattern was selected based on analysis of historical data, as well as other factors, such as general changes relevant to BREC's operations. The blending of judgment concerning current conditions and future trends, along with the matching of historical data, permits the depreciation analyst to make an informed selection of an account's average life and retirement dispersion pattern. Iowa Curves were used to depict the estimated survivor curves for each account.

Life Span Procedure

The life span procedure was used for production facilities for which most components are expected to have a retirement date concurrent with the planned retirement date of the generating unit. The terminal retirement date refers to the year that each unit will cease operations. The estimated terminal retirement dates for the various generating units were provided by BREC based on determinations made by BREC management, financial, and engineering staff. Those estimated terminal retirement dates are shown in Appendix D.

Interim Retirement Curves

Interim retirement curves were used to model the retirement of individual assets within primary plant accounts for each steam and other production generating unit prior to the terminal retirement of the facility. The life span procedure assumes all assets are depreciated (straight-line) for the same number of periods and retire at the same time (the terminal retirement date). Adding interim retirement curves to the procedure reflects the fact that some of the assets at a power plant will not survive to the end of the life of the facility and should be depreciated (straight-line) more quickly and retired earlier than the terminal life of the facility. The goal of interim retirement curves is to project how many of the assets that are currently in service will retire each year in the future using historical analysis and judgment. These curves were chosen based primarily on an analysis of the historical retirement pattern of the Steam and Other Production assets and on consultation with BREC personnel. Interim retirements for each plant account were modeled using Iowa Curves, as discussed above. By applying interim retirements, recognition is given to the obvious fact that generating units will have retirements of depreciable property before the

end of their lives.

Although interim retirements have been recognized in the study, interim additions (*i.e.*, future additions) have been excluded from the study. The estimated amount of future additions might or might not occur. There is no uncertainty, however, as to whether the full level of interim retirements will happen. The assets that are being modeled for retirement are already in rate base. Steam and Other Production depreciation rates using interim retirements are known and measurable in the same way that setting depreciation rates for transmission property using Iowa Curves is known and measurable. There is no depreciable asset that is expected to live forever, and all assets at a power plant will retire at some point. Interim retirements simply model when those retirements will occur by employing the same method that is used for transmission assets.

Actuarial Analysis

Actuarial analysis (retirement rate method) was used in evaluating historical asset retirement experience where vintage data was available and sufficient retirement activity was present. In actuarial analysis, interval exposures (total property subject to retirement at the beginning of the age interval, regardless of vintage) and age interval retirements are calculated. The complement of the ratio of interval retirements to interval exposures establishes a survivor ratio. The survivor ratio is the fraction of property surviving to the end of the selected age interval, given that it has survived to the beginning of that age interval. Survivor ratios for all of the available age intervals were chained by successive multiplications to establish a series of survivor factors, collectively known as an observed life table. The observed life table shows the experienced mortality characteristic of the account and may be compared to standard mortality curves such as the Iowa Curves. Many accounts were analyzed using this method. Placement bands were used to illustrate the composite history over a specific era, and experience bands were used to focus on retirement history for all vintages during a set period. Matching data in observed life tables for each experience and placement band to an Iowa Curve requires visual examination. As stated in Depreciation Systems by Wolf and Fitch, "the analyst must decide which points or sections of the curve should be given the most weight. Points at the end of the curve are often based on fewer exposures and may be given less weight than those points based on

larger samples" (page 46). Some analysts chose to use mathematical fitting as a tool to narrow the population of curves using a least squares technique. Use of the least squares approach does not imply a statistical validity, however, because the underlying data does not meet criteria for independence between vintages and the same average price for property units through time. Thus, Depreciation Systems cautions, "... the results of mathematical fitting should be checked visually and the final determination of best fit made by the analyst" (page 48). This study uses the visual matching approach to match Iowa Curves, since mathematical fitting produces theoretically possible curve matches. Visual examination and experienced judgment allow the depreciation professional to make the final determination as to the best curve type.

Judgment

Any depreciation study requires informed judgment by the analyst conducting the study. A knowledge of the property being studied, company policies and procedures, general trends in technology and industry practice, and a sound basis of understanding depreciation theory are needed to apply this informed judgment. In this depreciation study, judgment was used in areas such as survivor curve modeling and selection, depreciation method selection, and actuarial analysis.

Where there are multiple factors, activities, actions, property characteristics, statistical inconsistencies, property mix in accounts or a multitude of other considerations that affect the analysis (potentially in various directions), judgment is used to take all of these considerations and synthesize them into a general direction or understanding of the characteristics of the property. Individually, no one consideration in these cases may have a substantial impact on the analysis, but overall, the collective effect of these considerations may shed light on the use and characteristics of assets. Judgment may also be defined as deduction, inference, wisdom, common sense, or the ability to make sensible decisions. There is no single correct result from statistical analysis; hence, there is no answer absent judgment.

Theoretical Depreciation Reserve

The book accumulated provision for depreciation within each function was allocated

among Production, Transmission, and General Property Plant accounts through the use of the theoretical depreciation reserve model. This study used a reserve model that relied on a prospective concept relating future retirement and accrual patterns for property, given current life and salvage estimates.

The theoretical reserve of a property group is developed from the estimated remaining life of the group, the total life of the group, and estimated net salvage. The theoretical reserve represents the portion of the group cost that would have been accrued if current forecasts were used throughout the life of the group for future depreciation accruals. The computation involves multiplying the vintage balances within the group by the theoretical reserve ratio for each vintage. The straight-line remaining-life theoretical reserve ratio (RR) at any given age is calculated as:

$$RR = 1 - \frac{(Average\ Remaining\ Life)}{(Average\ Service\ Life)} * (1 - Net\ Salvage\ Ratio)$$

DETAILED DISCUSSION

Depreciation Study Process

This depreciation study encompassed four distinct phases. The first phase involved data collection and field interviews. The second phase was where the initial data analysis occurred. The third phase was where the information and analysis were evaluated. After the first three stages were complete, the fourth phase began. This phase involved the calculation of deprecation rates and documenting the corresponding recommendations.

During the Phase I data collection process, historical data was compiled from continuing property records and general ledger systems. Data was validated for accuracy by extracting and comparing to multiple financial system sources: Projects System (Construction ledger), Fixed Asset System (continuing property ledger), General Ledger, and interfaces from other operating systems. Audit of this data was validated against historical data from prior periods, historical general ledger sources, and field personnel discussions. This data was reviewed extensively so that it could be put in the proper format for a depreciation study. Further discussion on data review and adjustment is found in the Salvage Consideration section of this study. Also, as part of the Phase I data collection process, numerous discussions were conducted with engineers and field operations personnel to obtain information that would be helpful in formulating life and salvage recommendations in this study. One of the most important elements in performing a proper depreciation study is to understand how a company utilizes assets and the environment of those assets. Understanding industry and geographical norms for mortality characteristics are important factors in selecting life and salvage recommendations; however, care must be used not to apply them rigorously to any particular company since no two companies would have the same exact forces of retirement acting upon their assets. Interviews with engineering and operations personnel are important ways to allow the analyst to obtain information that is helpful when evaluating the output from the life and net salvage programs in relation to a company's actual asset utilization and environment. Information that was gleaned in these discussions with BREC personnel for this study is found both in the Detailed Discussion portions of the Life Analysis and Salvage Analysis sections and also in workpapers. In addition, Alliance personnel possess a significant understanding of

the types of electric utility property, the forces of retirement due to years of day-to-day exposures, and operations of electric utility property.

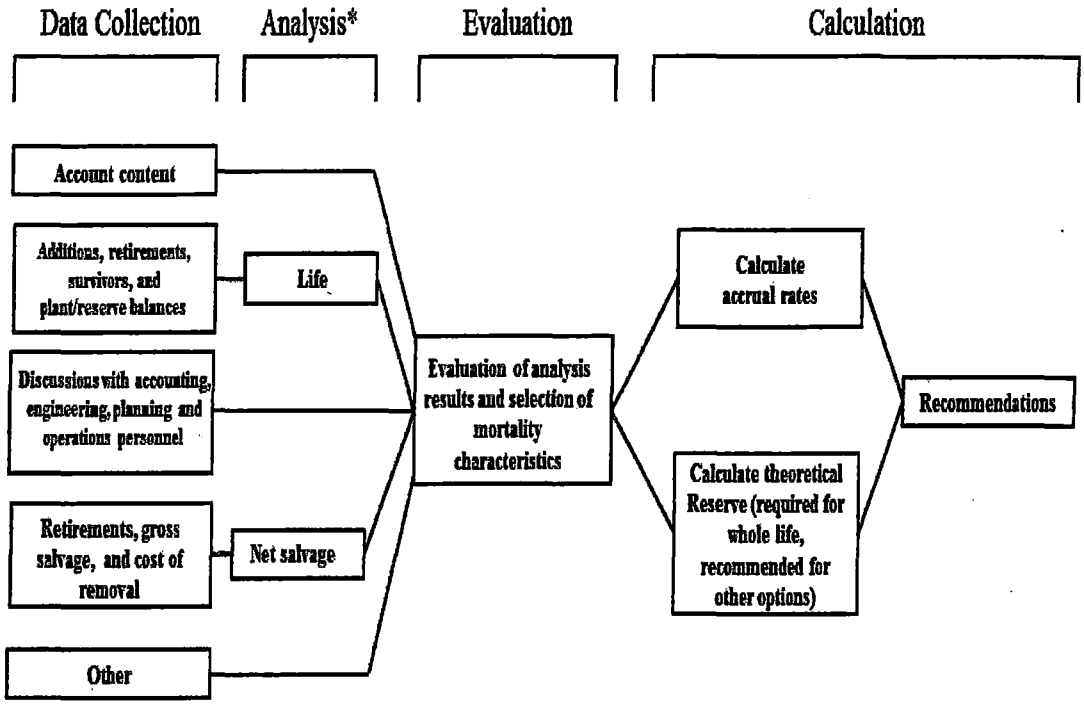
Phase 2 is where the actuarial analysis is performed. Phase 2 and Phase 3 (to be discussed in the next paragraph) overlap to a significant degree. The detailed property records information is used in Phase 2 to develop observed life tables for life analysis. It is possible that an analyst would cycle back to this phase based on the evaluation process performed in Phase 3. Net salvage analysis consists of compiling historical salvage and removal data by functional group and account to determine values and trends in gross salvage and removal cost. This information is then carried forward into Phase 3 for the evaluation process.

Phase 3 is the evaluation process, which synthesizes analysis, interviews, and operational characteristics into a final selection of asset lives and net salvage parameters. The historical analysis from Phase 2 is further enhanced by the incorporation of recent or future changes in the characteristics or operations of assets that were revealed in Phase 1. The preliminary results are then reviewed by the depreciation analyst and discussed with accounting and operations personnel. Phases 2 and 3 allow a depreciation analyst to validate the asset characteristics as seen in the accounting transactions with actual company operational experience.

Finally, Phase 4 involves calculating accrual rates, making recommendations and documenting the conclusions in a final report. The calculation of accrual rates for this study is found in Appendix A. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 1[1] documents the steps used in conducting this study. Depreciation Systems[2] documents the same basic processes in performing a depreciation study.

[1] American Gas Association and Edison Electric Institute, *Introduction to Depreciation for Public Utilities and Other Industries* (2013).
[2] W. C. Fitch and F. K. Wolf, *Depreciation Systems* 289 (Iowa State Press 1994).

Book Depreciation Study Flow Diagram



Source: Introduction to Depreciation for Public Utilities and Other Industries, AGA EEI, 2013.

*Although not specifically noted, the mathematical analysis may need some level of input from other sources (for example, to determine analysis bands for life and adjustments to data used in all analysis).

BREC Depreciation Study Process

Production Depreciation Calculation Process

Annual depreciation expense amounts for the Steam Production and Other Production accounts were calculated by the straight line, remaining life procedure. In a whole life representation, the annual accrual rate is computed by the following equation,

$$\textit{Annual Accrual Rate} = \frac{\textit{(100\% - Net Salvage Percent)}}{\textit{Average Service Life}}$$

In the case of steam production facilities with a terminal life and interim retirement curve, each vintage within the group has a unique average service life and remaining life determined by computing the area under the truncated Iowa Curve coupled with the group's terminal life. Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. For Production assets, the remaining life for each account is derived from the remaining life of the generating unit. With the straight line, remaining life, average life group system, composite remaining lives were calculated by computing a direct weighted average of each remaining life by vintage within the group. Within each group, for each plant account and generating unit, the difference between the surviving investment, adjusted for estimated future net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$\textit{Annual Depreciation Expense} = \frac{\textit{Original Cost – Book Reserve – (Original Cost * Net Salvage \%)}}{\textit{Remaining Life}}$$

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

$$\text{Annual Depreciation Rate} = \frac{\sum \text{Annual Depreciation Expense}}{\sum \text{Original Cost}}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in the workpapers. Book depreciation reserves are maintained on a plant account and generating unit level basis. Book depreciation reserves exclude the deferred gain/loss account,

Transmission and General Calculation Process

Annual depreciation expense amounts for Transmission and General Property Accounts 390 - General Structures and Improvements, 392 Transportation Equipment, and 396 Power Operated Equipment were calculated by the straight line, average life group, remaining life procedure.

In a whole life representation, the annual accrual rate is computed by the following equation,

$$\text{Annual Accrual Rate} = \frac{\text{(100\% - Net Salvage Percent)}}{\text{Average Service Life}}$$

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. With the straight line, remaining life, average life group system using Iowa Curves, composite remaining lives were calculated according to standard broad group expectancy techniques, noted in the formula below:

$$\text{Composite Remaining Life} = \frac{(\sum \text{Original Cost} - \text{Theoretical Reserve})}{\sum \text{Whole Life Annual Accrual}}$$

For each plant account, the difference between the surviving investment, adjusted for estimated future net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this

equation.

$$\text{Annual Depreciation Expense} = \frac{\text{Original Cost - Book Reserve - (Original Cost * Net Salvage \%)}}{\text{Composite Remaining Life}}$$

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

$$\text{Annual Depreciation Rate} = \frac{\sum \text{Annual Depreciation Expense}}{\sum \text{Original Cost}}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in the workpapers for this study. Book depreciation reserves are maintained on a plant account level basis. Book depreciation reserves exclude the deferred gain/loss account,

Vintage Group Amortization

Alliance proposes BREC to implement vintage group amortization for assets in Accounts 391, 393-395, and 397-398. Under vintage group amortization, assets in those accounts will be retired when they reach the average service life of the group. BREC has reviewed the life and net salvage parameters for all accounts in this group. In the life analysis and salvage analysis sections, Alliance recommended changes to each account description and the depreciation parameters requested for those accounts. The amortization accrual for General Property plant will change to reflect the reserve position of the various accounts and small changes in life parameters and net salvage percentages. This will allow BREC to continue to track small dollar General Property plant items in a cost efficient manner. The amortization accrual calculations for vintage group amortization are reflected in Appendix A-2.

The changes in General Property plant for Vintage Group Amortization assets resulted in a reserve difference that has to be addressed to provide full recovery of the cost for these assets. The remaining lives for each account range from 1.64 years to 21.19 years to recover any reserve true-up. This study recommends that the remaining life of each plant be used to recover the General Property plant reserve deficiency for each account in this study.

LIFE ANALYSIS

Alliance uses actuarial analysis of each account to create depreciation accrual rates for each account. The prior depreciation study did not perform actuarial analysis to aid in determining life for each account.

PRODUCTION PLANT

Steam Production, FERC Accounts 311-316

Other Production, FERC Accounts 340-346

BREC has the following Fossil Steam Production generating sites included in this study: Coleman, Green, Reid, and Wilson. Any other locations, like Central Lab and Central Machine shop, are tied to the last retirement of a generating unit. Other Production has only one generation site, the Reid GT. Station Two was excluded in this depreciation study due to the generation units being retired February 1, 2019.

Terminal Retirement Date

The terminal retirement date refers to the year in which a generating unit will be retired from service. The retirement can be for a number of reasons, such as the physical end of the generating unit, but will generally be driven by economic retirement of the unit. After reviewing the remaining life analysis performed for BREC in the last depreciation study, BREC personnel reviewed the terminal retirement dates used in the 2012 depreciation study to determine the remaining cost recovery periods for each generating unit. These dates are based on the current plans and investment in the generating units. Retirement dates for generating units can be found in Appendix D. As new investment is committed to these units or decisions made that units are not economically viable, these retirement dates may change. At this time, these retirement dates are the best estimate of the current lives remaining in the generating assets.

Interim Retirement Curve

Historical data used to develop interim retirement curves represents an aggregate of many property units in a group. Some of those assets may be long lived, and others may

have a short life. The average of those lives is represented by an interim retirement curve for the group. A group can be a plant account or a functional group. The interim retirement curve is "truncated" (*i.e.*, cut off) at the age the unit will retire. In other words, if one finds through the analysis that ten percent of the property in an account will be retired and replaced prior to the end of the life of the unit, the interim retirement curve will model those retirements across the rest of the life of the unit. If a pump is only going to last ten years but the unit is projected to last 20 years, the shorter life of the pump should affect the depreciation expense charged over the next ten years. When analyzing a large pool of assets like power plant accounts, these shorter lived items can be accurately modeled together statistically. Thus, given that interim retirements will occur, this statistical analysis enables one to measure the interim retirement curves applicable to property groups.

Some examples of "long lived" property that are projected to last until the retirement of a unit are: roads, bridges, railroad tracks, intake/discharge structures, structural steel (and misc. steel), cooling towers, buildings, cranes, dams, ponds, basins, canals, foundations, stacking and reclaiming equipment, surge silos, crushers, transfer towers, fly ash systems, precipitators, bag houses, stack, turbine (except blades) and piping, generator cooling system, vacuum systems, generator and main leads, station transformers, conduits and ducts, station grounding system, start-up diesel generators, and stores equipment.

Some examples of "shorter lived" property that are projected to retire prior to the retirement of the unit are: fences, signs, sprinkler systems, security systems, Intake screens, roofs, cooling fan units, air compressors, fuel oil heaters, heating, ventilation and air conditioners, piping, motors, pumps, conveyors, pulverizers, air preheaters, economizers, control equipment, feedwater heaters, boiler feedwater pumps, forced draft (FD) and induced draft (ID) fans, scrubbers, continuous emissions monitoring systems (CEM), turbine blades and buckets, turbine plant instruments, condensers, control equipment, station service switchgear, and universal power supply (UPS) batteries.

Assets from FERC Accounts 311-316 and 341-346 were analyzed using actuarial analysis to determine an interim retirement curve, which is discussed in detail below.

Interim Retirement Curve Life Analysis

Historical data for all units was combined by account in accounts 311-316 to analyze historic activity and develop proposed interim retirement curves. This combined experience across various generating units was used as a representation of BREC's' retirement history for fossil production to model future retirement activity. Proposed interim retirement lives and dispersion curves reflecting the recognition that some assets at each plant will retire prior to the end of the life of the unit were analyzed at an account level for all generating assets within each account.

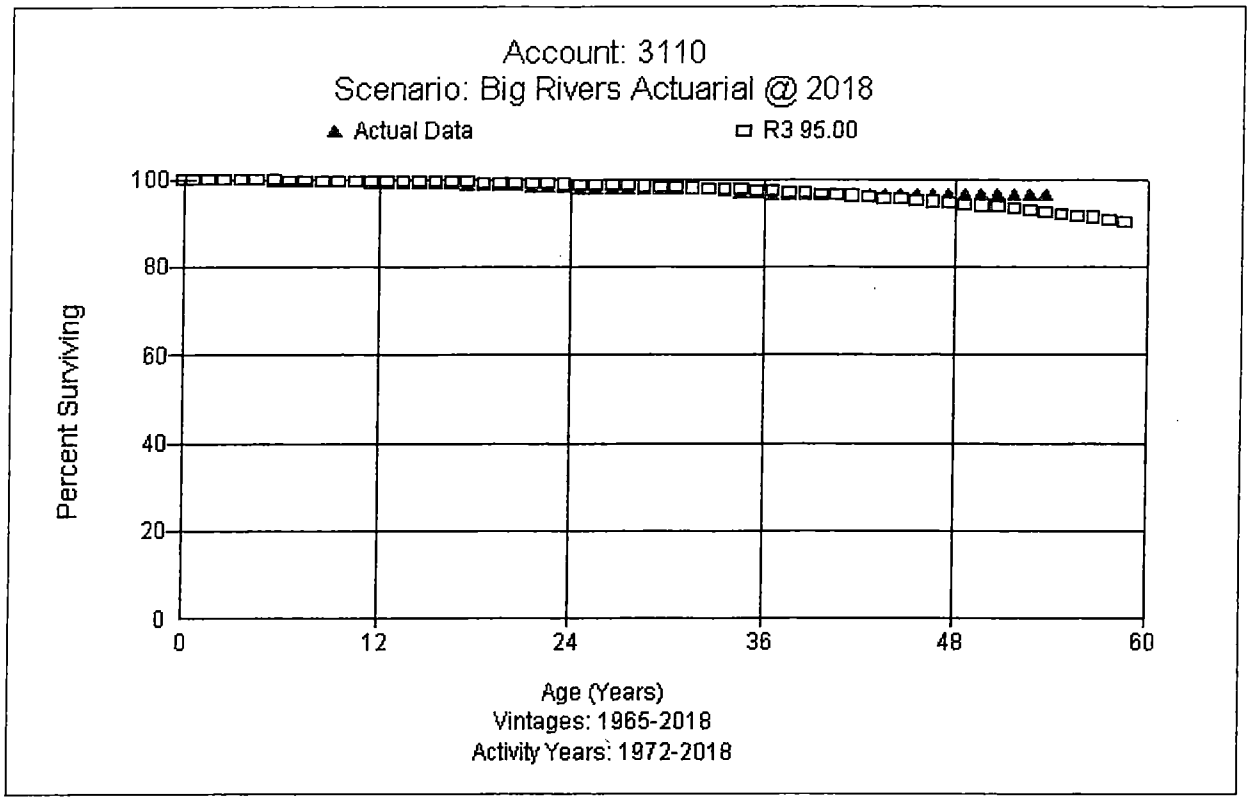
Steam Production

FERC Account 311.0 Structures and Improvements (95 R3)

This account consists of buildings, structures, fences, lighting systems, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The current balance in this account is $127 million.

Discussions with Company personnel indicated there have not been many replacements, which is confirmed in the interim retirement analysis. The Green Station Unit 2 Cooling towers will have a header replaced in 2020. The Green Station Unit 1 turbine building roof is expected to be replaced in 2020. At Green plant, the intake screes were replaced two years ago. A barge unloader cell was also replaced a few years ago at the Sebree location.

After reviewing visual matches of various curves and considering the types of assets in this account, this study recommends a 95 R3 dispersion curve for interim retirements. A graph of the observed life table versus the proposed curve is shown below.


Account: 3110
Scenario: Big Rivers Actuarial @ 2018
▲ Actual Data
□ R3 95.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1965-2018
Activity Years: 1972-2018

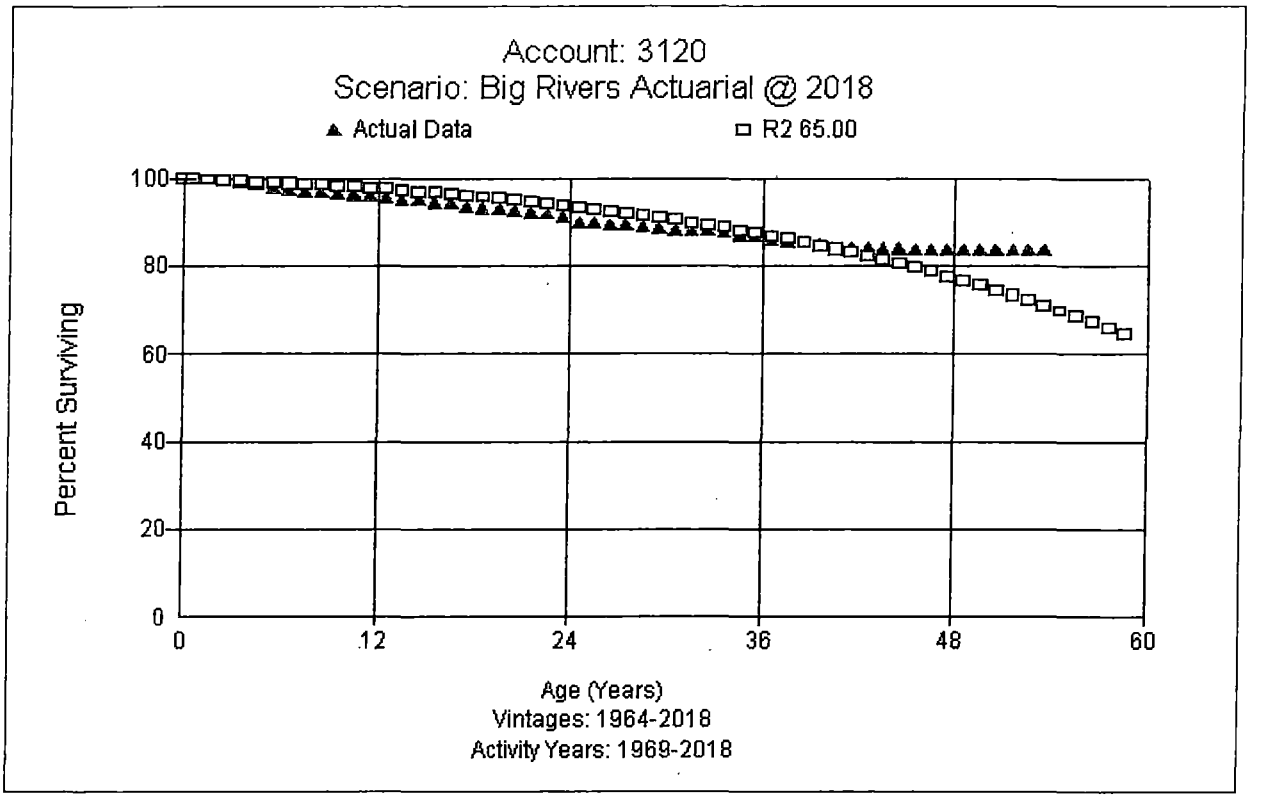
FERC Account 312.0 Boiler Plant Equipment (65 R2)

This account consists of boiler plant equipment, bag houses, preheaters, and other related equipment. Retirement dates for each unit are found in Appendix D. The current balance in this account is $685 million.

Discussions with Company personnel indicated the following replacements have occurred or are planned to occur in the future. At Wilson Station, they replaced two water wall panels, some upper furnace tubes, and chimney elevator in 2018. In 2019, boiler elevator controls were replaced. More water wall panels will be replaced in 2022, and the super heater replacement is planned for 2024, which is the second replacement. The coal conveyers will be replaced, starting in 2018, for a total of 4.3 miles. At Green Station, out of 20 sector plates, 12 will be replaced in 2020. The water wall panel for Unit 2 is expected to be replaced in 2020, but the Company has already replaced six panels and will replace another 12 in 2020. For Unit 1, approximately 5% of its water wall has been replaced.

Outages have been delayed somewhat compared to the past. The Company intends to get the outage cycles back on track. There was a process improvement, when MATS (which involves injecting hydrated lime into the process before the air heater baskets) was put in place, and this will likely help extend the life of some assets in this account.

After examining plots of observed life data versus various Iowa Curves and taking into consideration the types of assets in this account, this study recommends a 65 R2 dispersion curve for interim retirements. A graph of the observed life table versus the proposed curve is shown below.

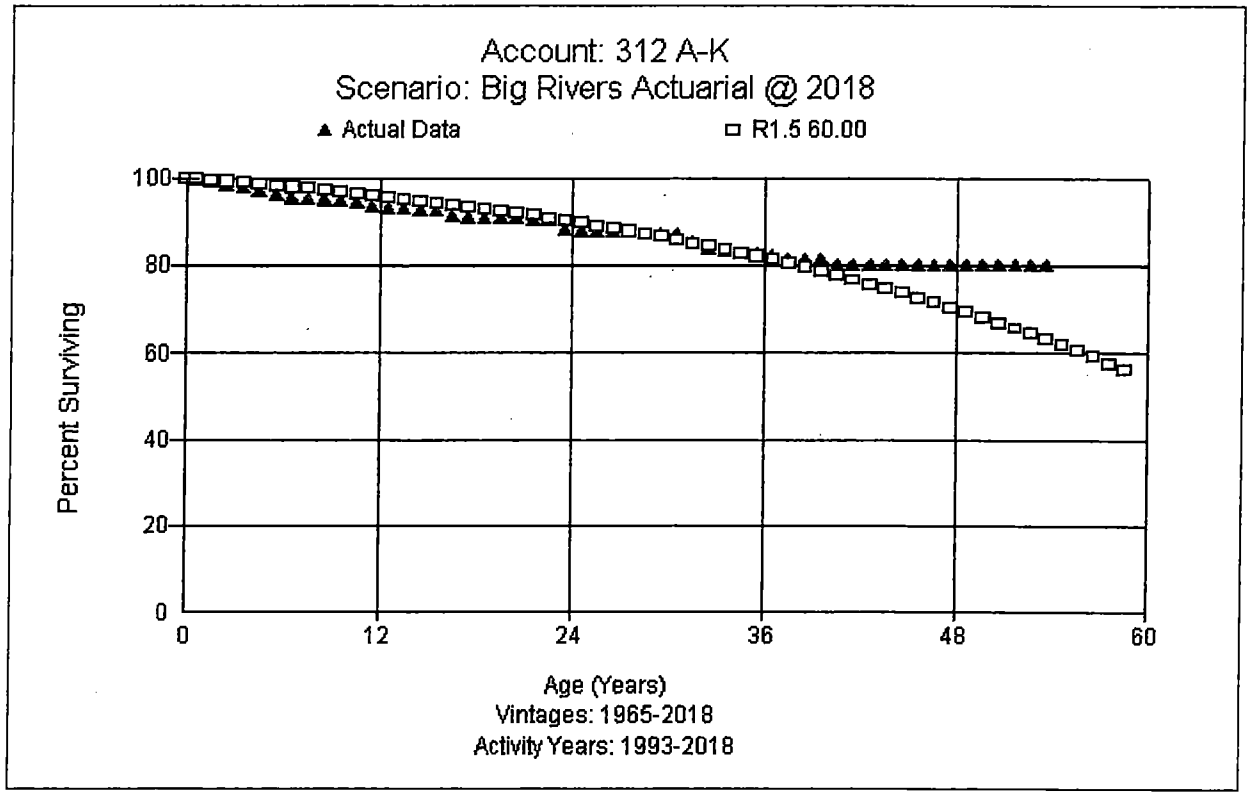

Account: 3120
Scenario: Big Rivers Actuarial @ 2018
Actual Data
R2 65.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1964-2018
Activity Years: 1969-2018

FERC Account 312.0 (A-K) Boiler Plant Equipment Environmental (60 R1.5)

This account consists of boiler plant equipment associated with environmental compliance items. Retirement dates for each unit are found in Appendix D. The current balance in this account is $537 million.

Discussions with Company personnel indicated the precipitator and FGD scrubber at Wilson Station will likely be replaced in 2022 (at 36 years). The Company rewound ID motors at Green Station and plan to replace drives with VF drives. The equipment in this account is in a more corrosive or harsher environment than the main account. ABB controls are also in this account.

After examining plots of observed life data versus various Iowa Curves and taking into consideration the types of assets in this account, this study recommends a 60 R1.5 dispersion curve for interim retirements. A graph of the observed life table versus the proposed curve is shown below.

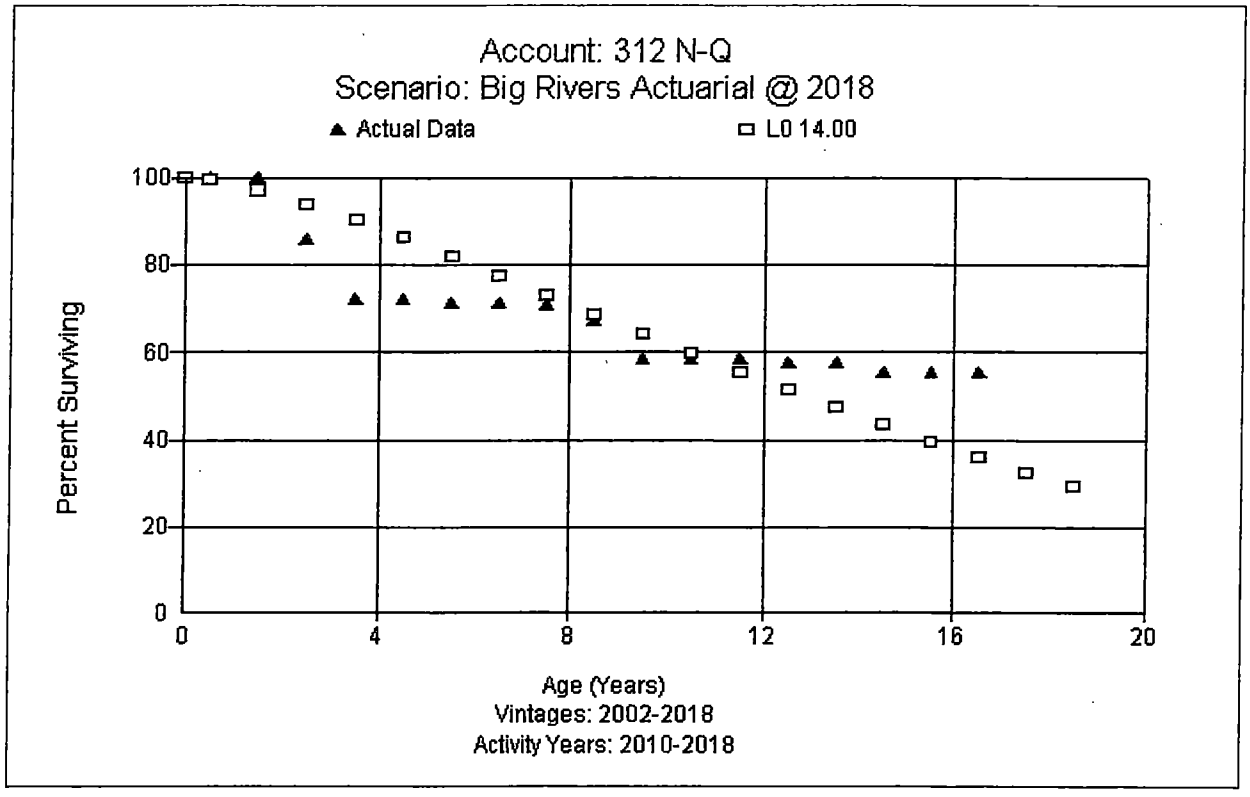


FERC Account 312.0 (N-Q) Boiler Plant Equipment Environmental Short Life (14 L0)

This account consists of boiler plant equipment associated with short lived environmental projects. Retirement dates for each unit are found in Appendix D. The current balance in this account is $7.6 million.

Discussions with Company personnel indicated the Wilson catalyst is on a 4 year cycle but can only be regenerated a fixed number of times, yielding approximately a 15 year overall life. New mist eliminators have a life cycle of around 15 years.

After examining plots of observed life data versus various Iowa Curves and taking into consideration the types of assets in this account, this study recommends a 14 L0 dispersion curve for interim retirements. A graph of the observed life table versus the proposed curve is shown below.

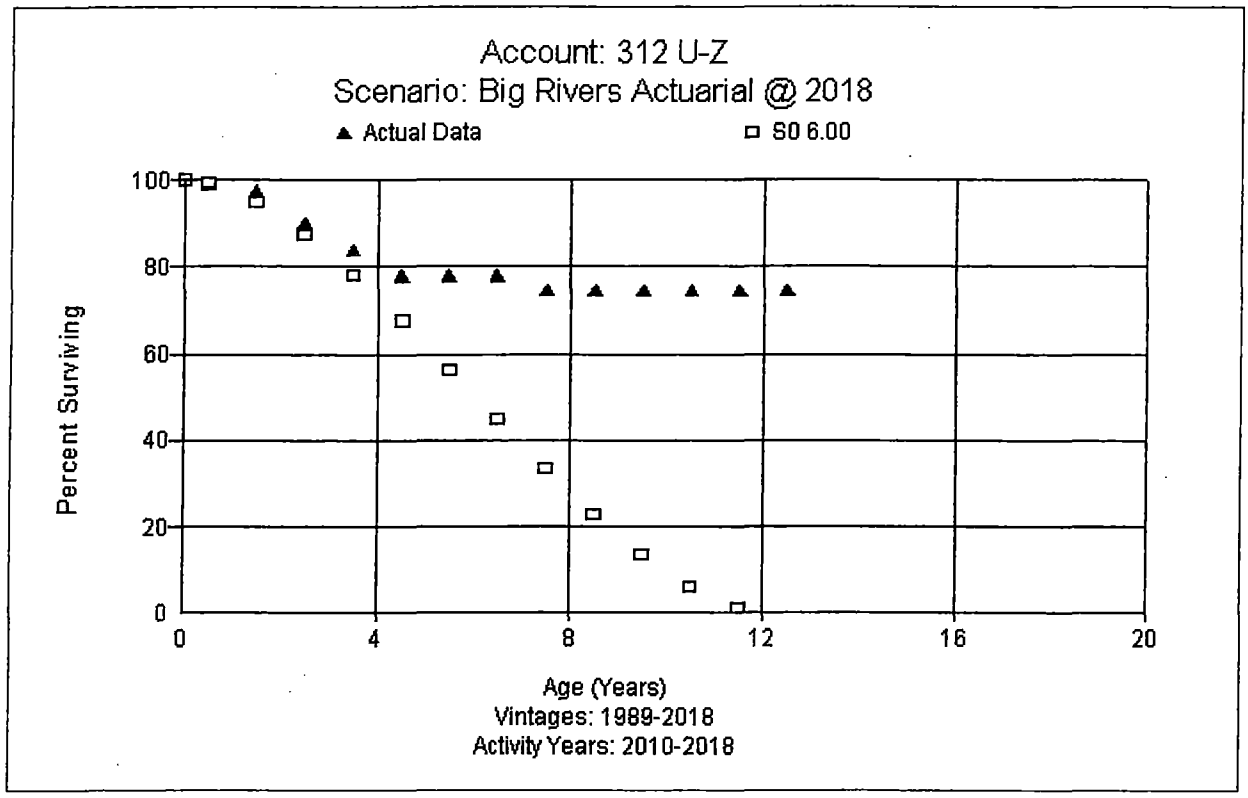


FERC Account 312.0 (U-Z) Boiler Plant Equipment Short Life (6 S0)

This account consists of short lived boiler plant equipment. Retirement dates for each unit are found in Appendix D. The current balance in this account is $3.8 million.

The air heater baskets, the largest asset in the group, have a 4-6 year life cycle. Conveyer belts have a 10 year life, and slag grinders and DCS switches, which are also in the account, have a lower life expectation. Outages have been delayed somewhat compared to historical trends. The Company's intent is to get the outage cycles back on track. There was a process improvement when MATS (which involves injecting hydrated lime into the process before the air heater baskets) was put into place. This will likely help extend the life a little.

After examining plots of observed life data versus various Iowa Curves and taking into consideration the types of assets in this account, this study recommends a 6 S0 dispersion curve for interim retirements. A graph of the observed life table versus the proposed curve is shown below.

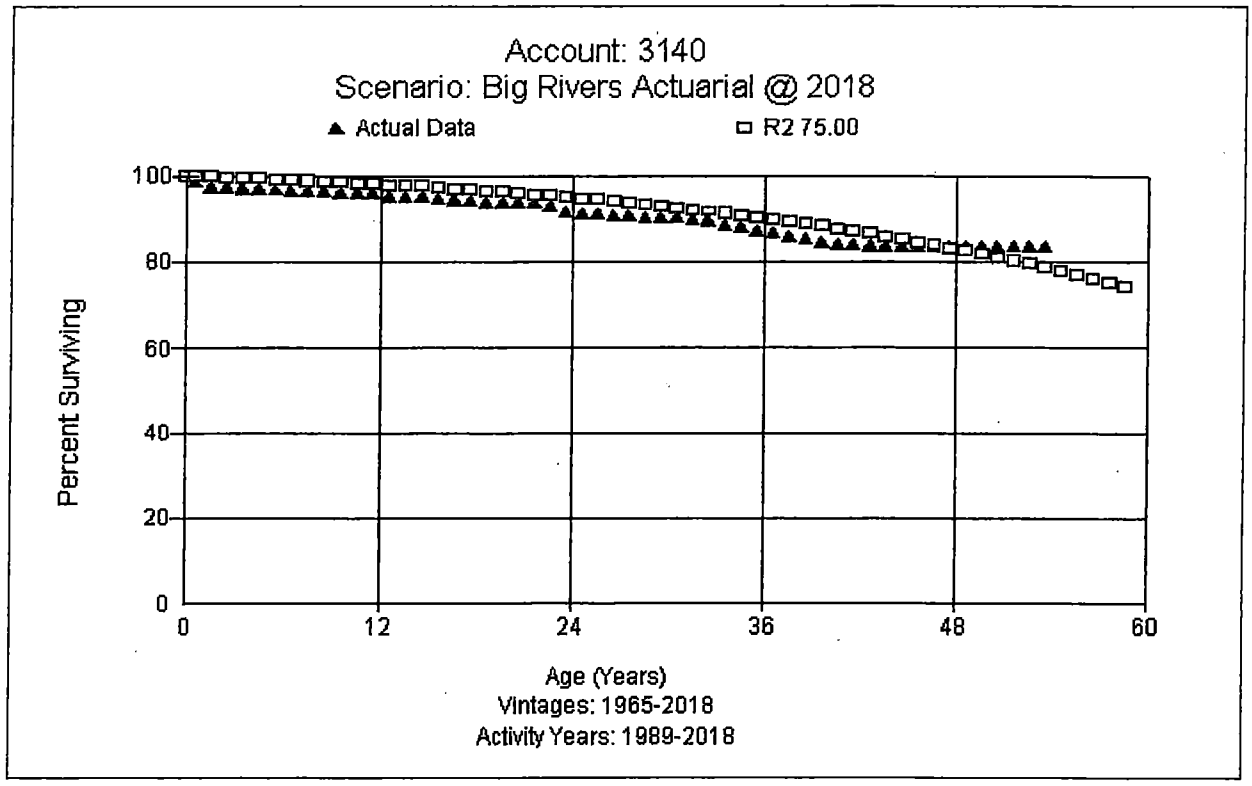


FERC Account 314.0 Turbogenerator Equipment (75 R2)

This account consists of turbogenerator equipment, stationary blades, turbine control systems, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The current balance in this account is $232 million.

Discussions with Company personnel indicated there is a planned generator rewind for Green Unit 1. The Company plans to replace diaphragms, L0 blades, and the turbine trip block in 2023. The last turbine overhaul on this unit was in 2015, where they changed the main steam out stop valve, as well as performed extensive work on the cooling towers, fire protection system, and other items. For Wilson, the turbine was overhauled in 2018, the capital portion of nozzle block was replaced. In 2020 the Company plans to replace the voltage regulator, and a field in the cooling tower will be replacement in 2022.

After examining various placement and experience bands and considering the characteristics of the assets in the account, this study recommends a 75 R2 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.

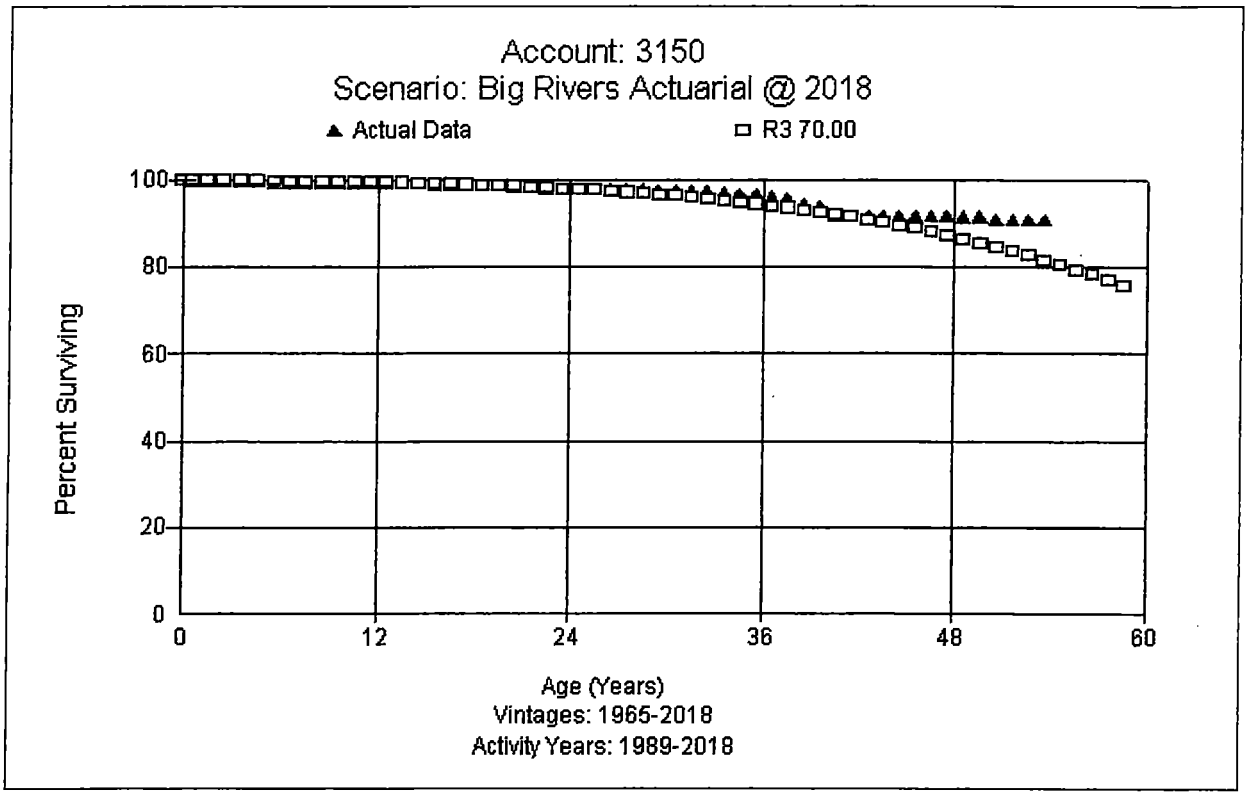


FERC Account 315.0 Accessory Electric Equipment (70 R3)

This account consists of power transformers, cable trays, duct banks, cabling, switchgear, MCC, relays, and related assets at each power plant. Retirement dates for each unit are found in Appendix D. The current balance in this account is $65.3 million.

Discussions with Company personnel indicated they have been replacing transformers as well as relays over the last several years. At Green Station, there is a planned MCC replacement in 2020. Other MCCs were replaced in 2015 and 2017. For the Wilson plant their transformers have Freon, which they are changing to oil filled over time.

After reviewing plots and actuarial results, and considering the characteristics of the assets in this account, this study recommends a 70 R3 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.

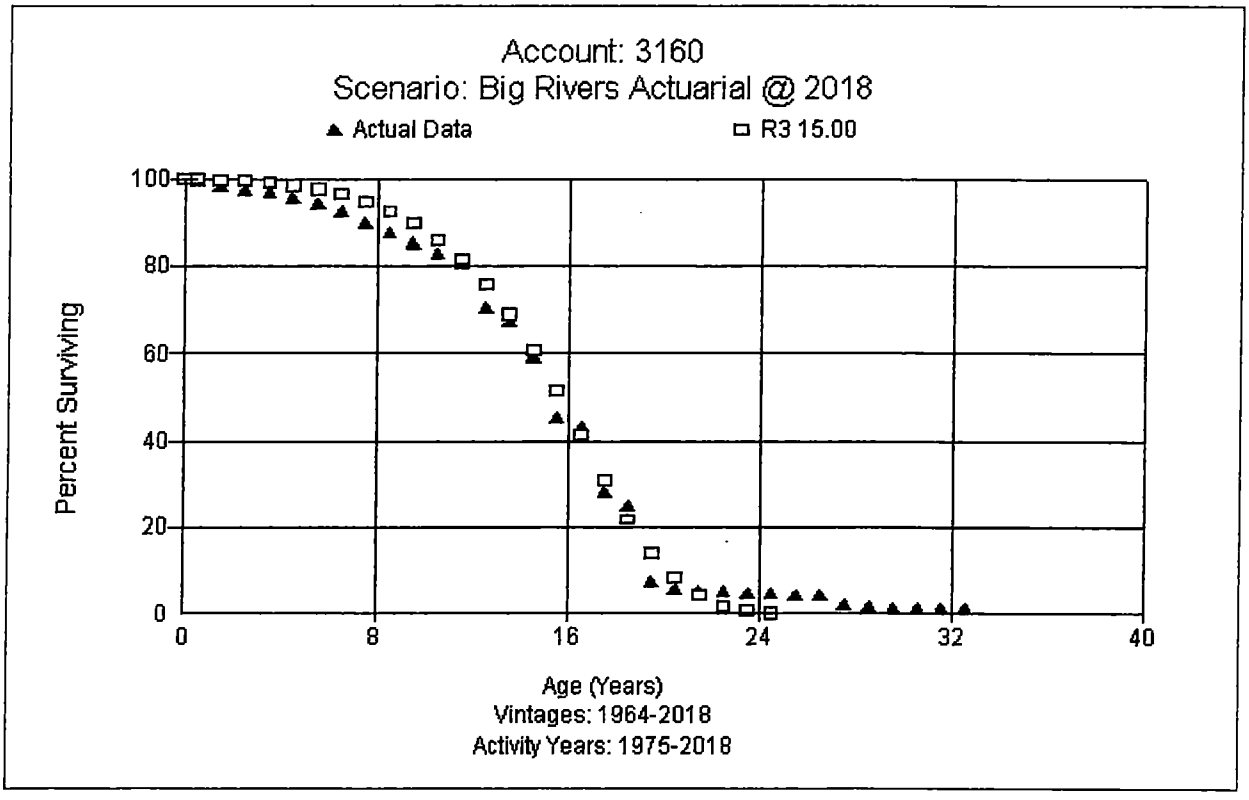


FERC Accounts 316.0 Miscellaneous Power Plant Equipment (15 R3)

This account consists of tanks, pumps, skid steer, air compressors, cranes, fort lifts, welding machine, eye wash system, and other related assets at each power plant. Retirement dates for each unit are found in Appendix D. The current balance in this account is $6.2 million.

Discussions with Company personnel indicated these are generally work tools and smaller assets used to support the power plants operations. They are planning to replace a mobile crane in 2021, which is expected to have a life between 10-15 years.

After reviewing actuarial analysis of various bands and examining the types of assets in the account, this study recommends a 15 R3 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.



Other Production, FERC Accounts 340-346

Interim Retirement Curve

Historical data for all units was combined by account in accounts 341-346 to analyze historic activity and develop proposed interim retirement curves. This combined experience across various generating units was used as a representation of BREC's retirement history for Other Production to model future retirement activity. Proposed interim retirement lives and dispersion curves reflecting the recognition that some assets at each plant will retire prior to the end of the life of the unit were analyzed at an account level for all generating assets within each account.

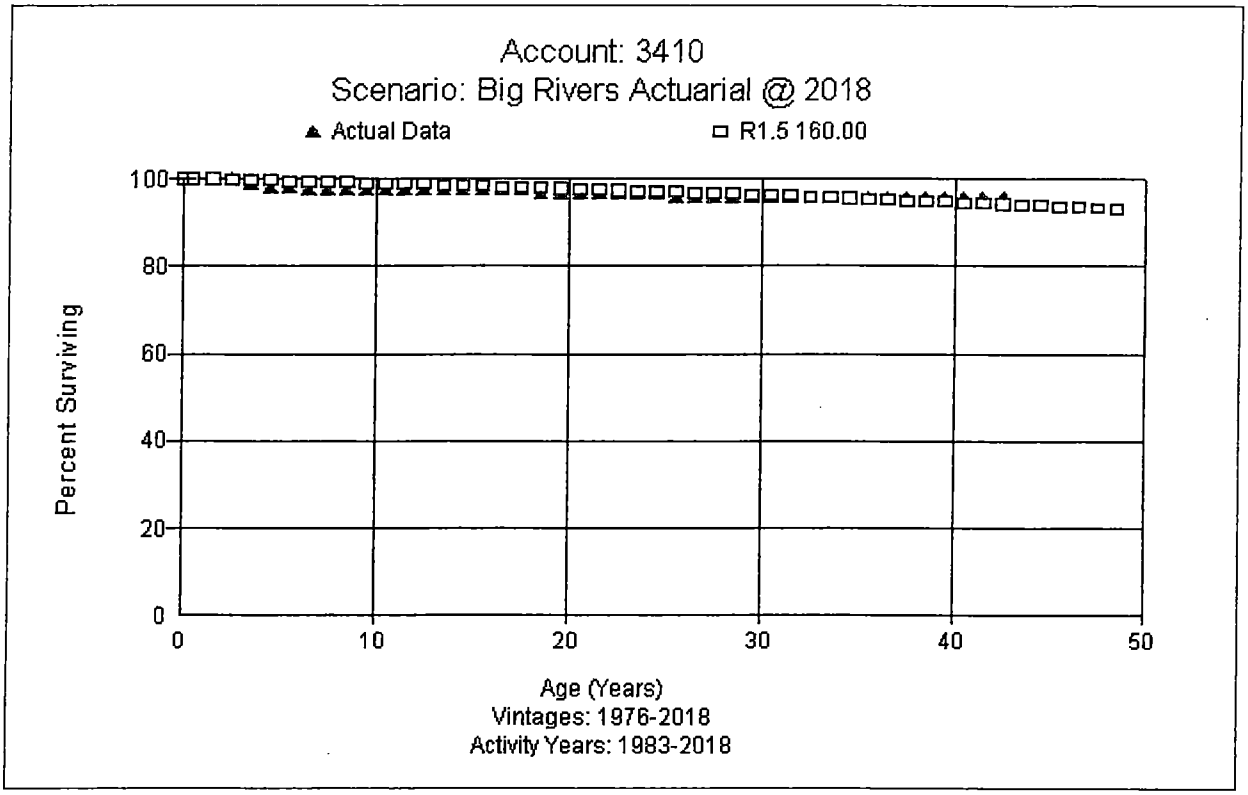
The only power plant in this group is the Reid Gas Turbine, which is a peaking unit installed in the late 1970s. Overhauls can be triggered by hours and sometimes by starts/stops. For most major issues the unit has a 15-20 year cycle for major repairs/ overhauls. Company personnel report that they had a generator rewind in 2015.

FERC Account 341.0 Structures and Improvements (160 R1.5)

This account consists of buildings, structures, fences, lighting systems, and other related assets at Reid GT. Retirement dates for each unit are found in Appendix D. The current balance in this account is $168 thousand.

Company personnel report that most of the assets in this account are original installation with few retirements.

Based on judgment, this study recommends a 160 R1.5 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.

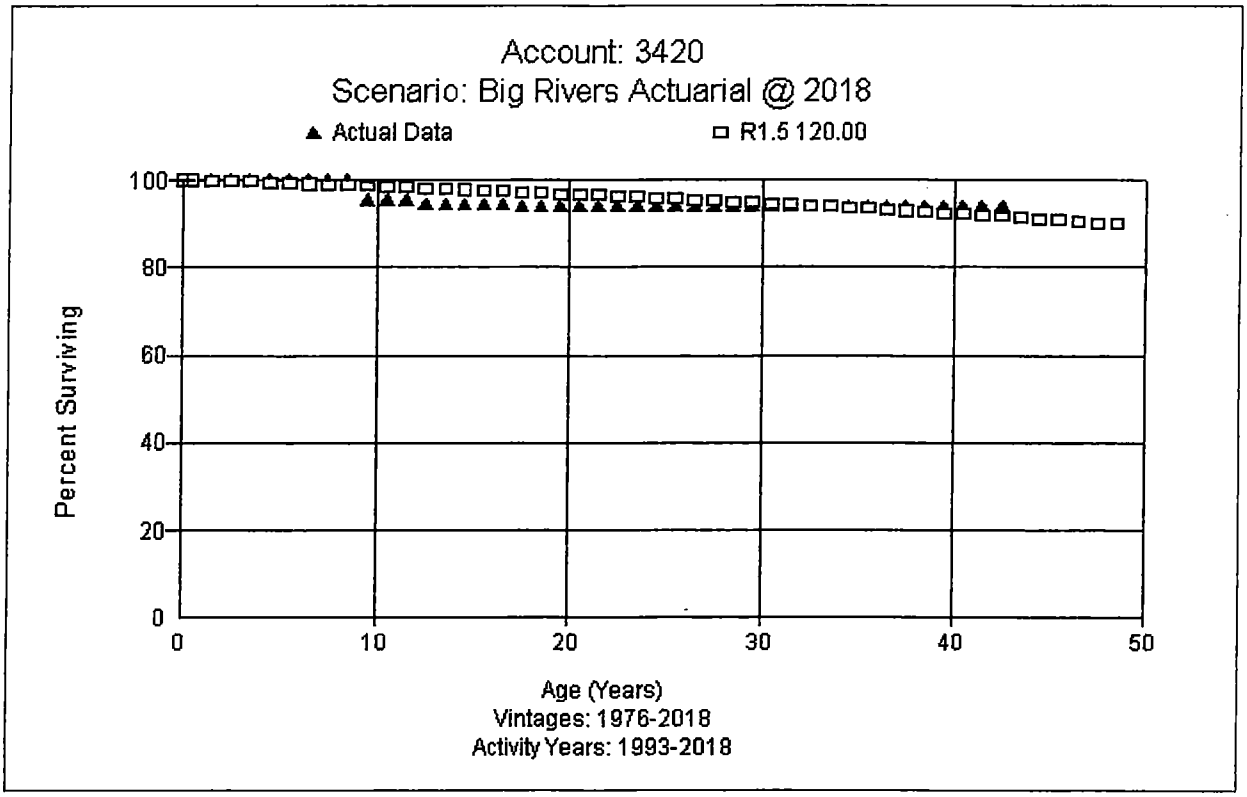


FERC Account 342.0 Fuel Holders and Accessory Equipment (120 R1.5)

This account consists of fuel holders UB piping, gas heater, pumps, storage tanks, natural gas/fuel oil piping and other related assets at Reid GT. Retirement dates for each unit are found in Appendix D. The current balance in this account is $1.4 million.

The Company recently replaced underground piping and a heater in this account. Company personnel expect very few retirements in this account.

Based on judgment and the recommendation, this study recommends a 120 R1.5 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.

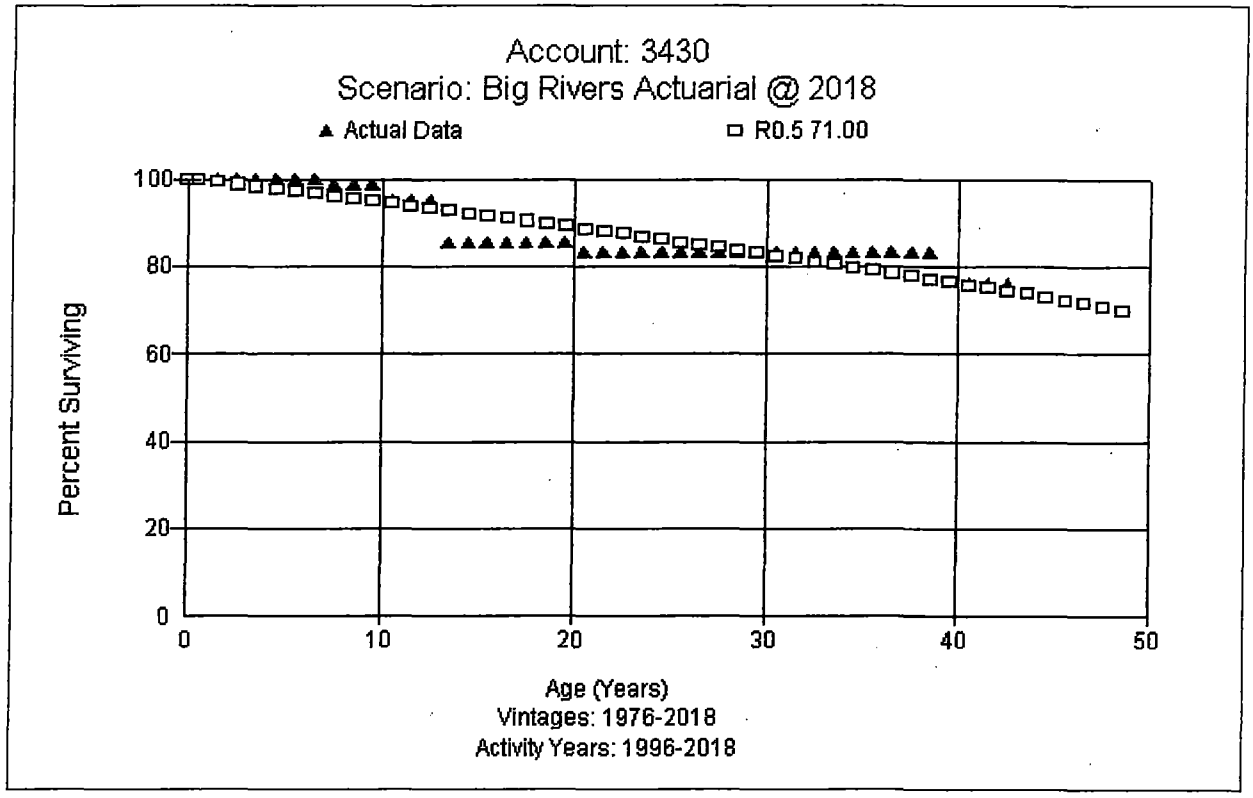


FERC Account 343.0 Prime Movers (71 R0.5)

This account consists of compressor, engine, duct work, state 1-3 buckets, foundations, chimneys, demineralizers, fire protection systems, and other related assets at Reid GT. Retirement dates for each unit are found in Appendix D. The current balance in this account is $6.5 million.

The first stage nozzle and duct work were replaced several years ago. In 2014 there was additional replacement of duct work, buckets, wheels, and nozzle.

Based on judgment, this study recommends a 71 R0.5 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.

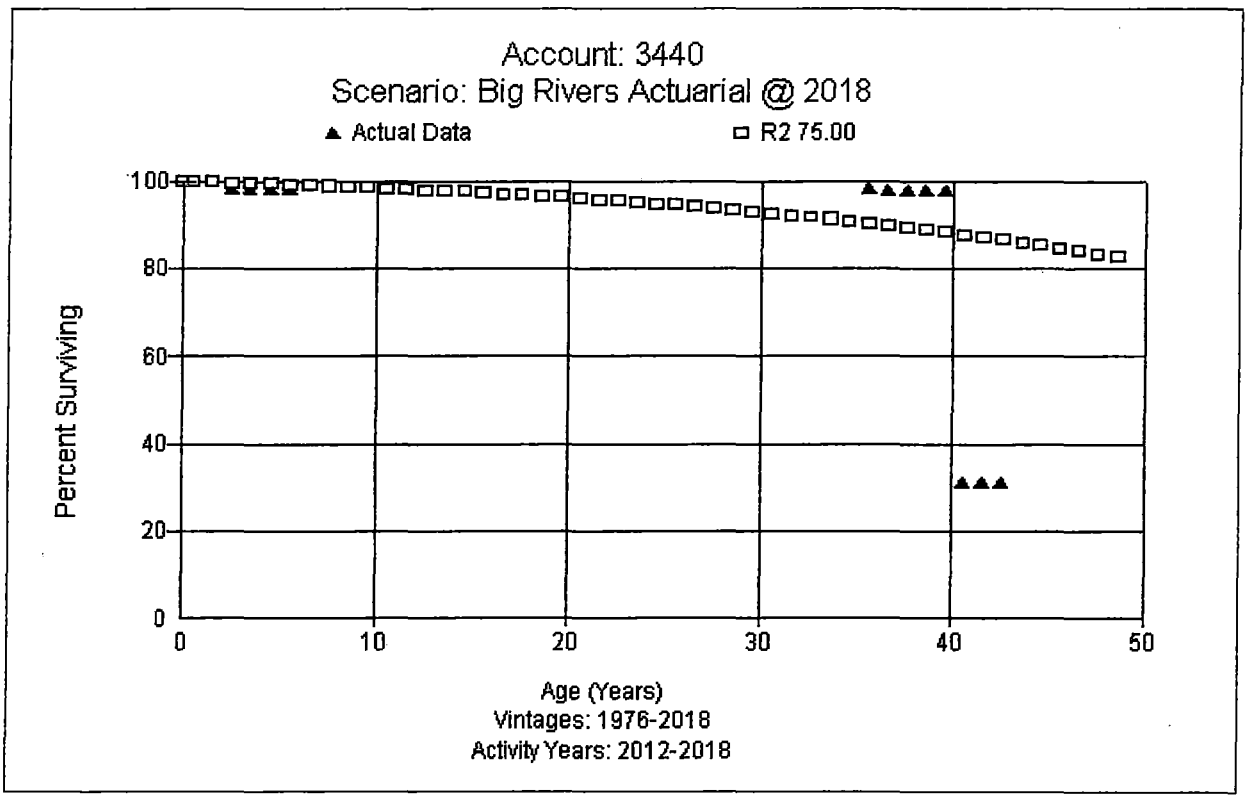


FERC Account 344.0 Generators (75 R2)

This account consists of generators and other related assets at Reid GT. Retirement dates for each unit are found in Appendix D. The current balance in this account is $1.9 million.

Discussions with Company personnel indicated there was a generator rewind in this account in 2015-2016.

Based on judgment, this study recommends a 75 R2 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.

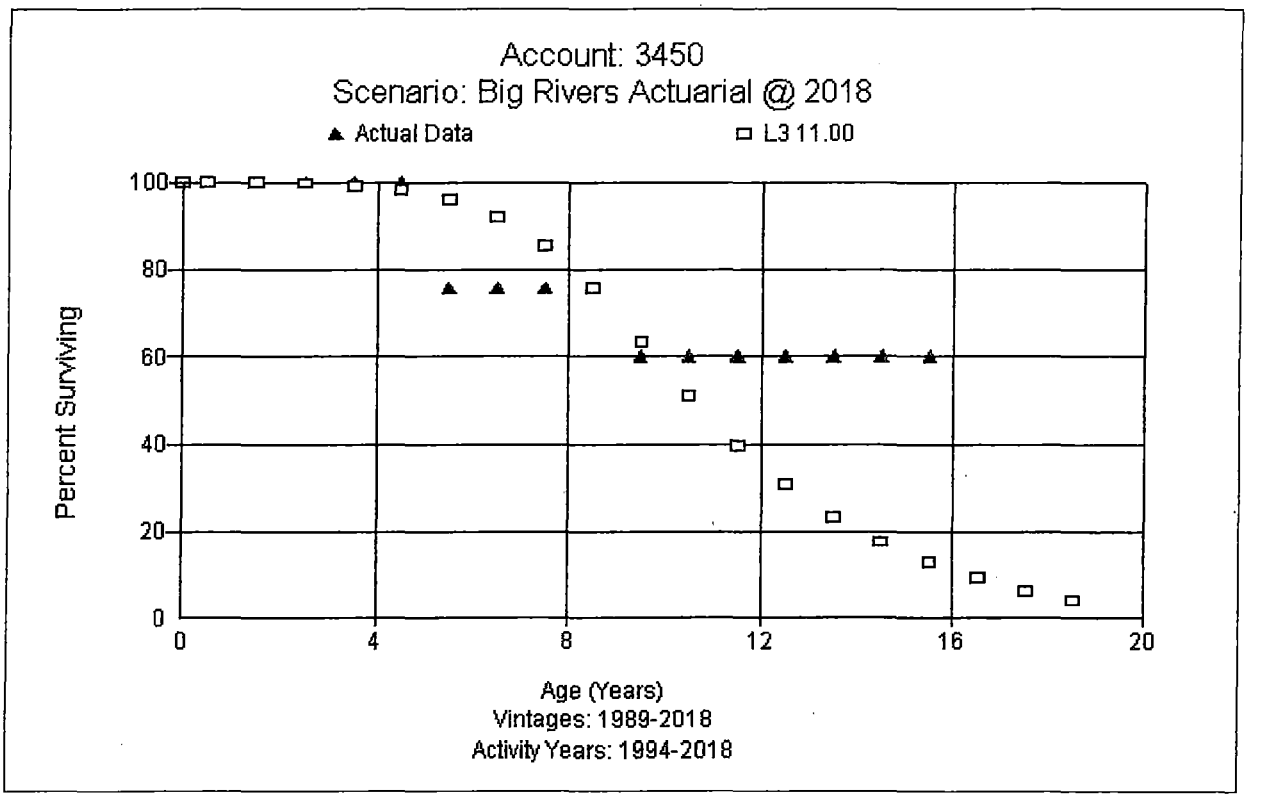


FERC Account 345.0 Accessory Electric Equipment (11 L3)

This account consists of power transformer, regulators, and related assets at Reid GT. Retirement dates for each unit are found in Appendix D. The current balance in this account is $562 thousand.

Discussions with Company personnel indicated this account contains various small tools used to support work that is performed on the unit. There are a variety of assets, but most are not expected to have a life beyond 15 years.

Based on judgment and the life analysis, this study recommends the 11 L3 dispersion curve. A graph of the observed life table versus the proposed curve is shown below.



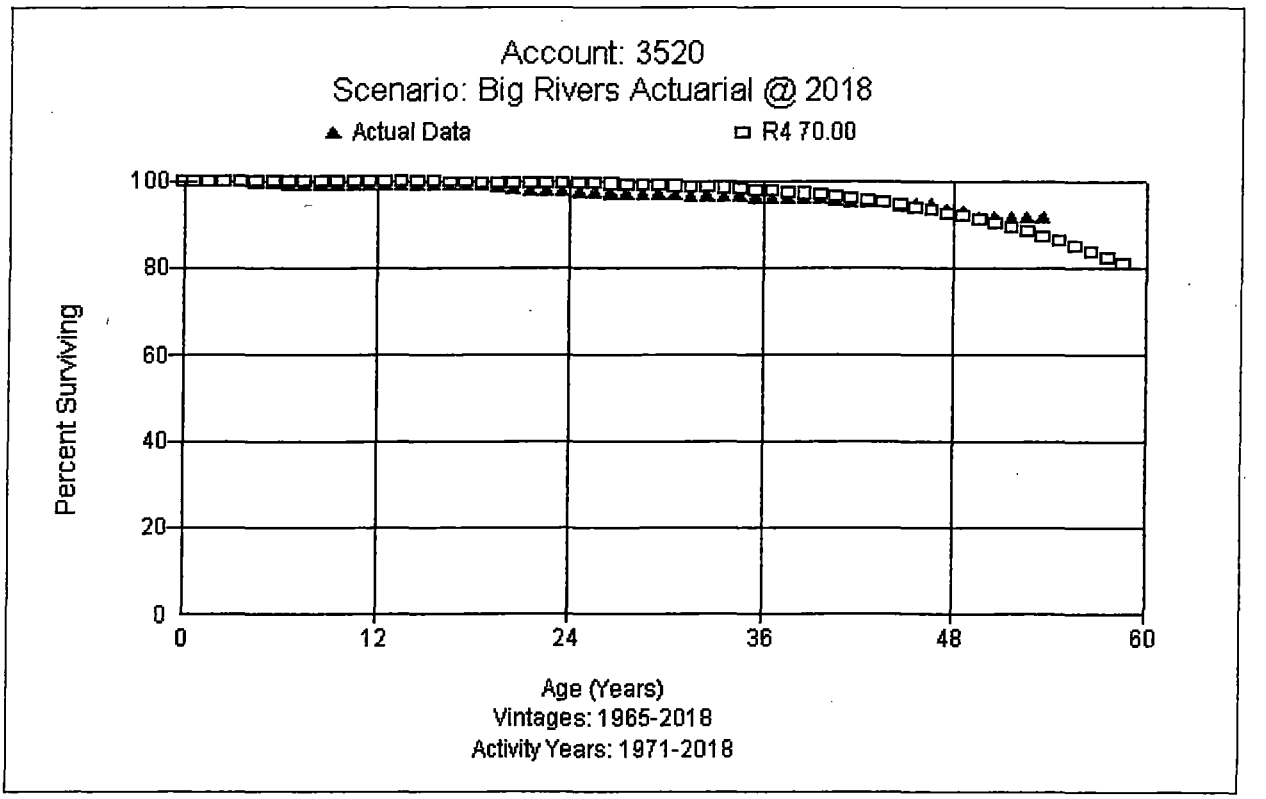
Transmission Accounts, FERC Accounts 352-356

FERC Account 352 Transmission Substation Structures and Improvements (70 R4)

This account includes buildings, fencing, and other structures found in a transmission substation. The account balance for this account at December 31, 2018 is $8.5 million.

Company personnel report that a significant portion of the cost is site prep, rip rap, and structural steel. Company experts believe that these assets would have a longer life than the substation equipment in Account 353. The Company has no plans to move any substations and there have not been many retirements.

Limited retirements make actuarial analysis difficult. Based on input from Company personnel and actuarial analysis, a 70 year life is recommended with the R4 dispersion for this account. A graph of the observed life table versus the proposed curve is shown below.

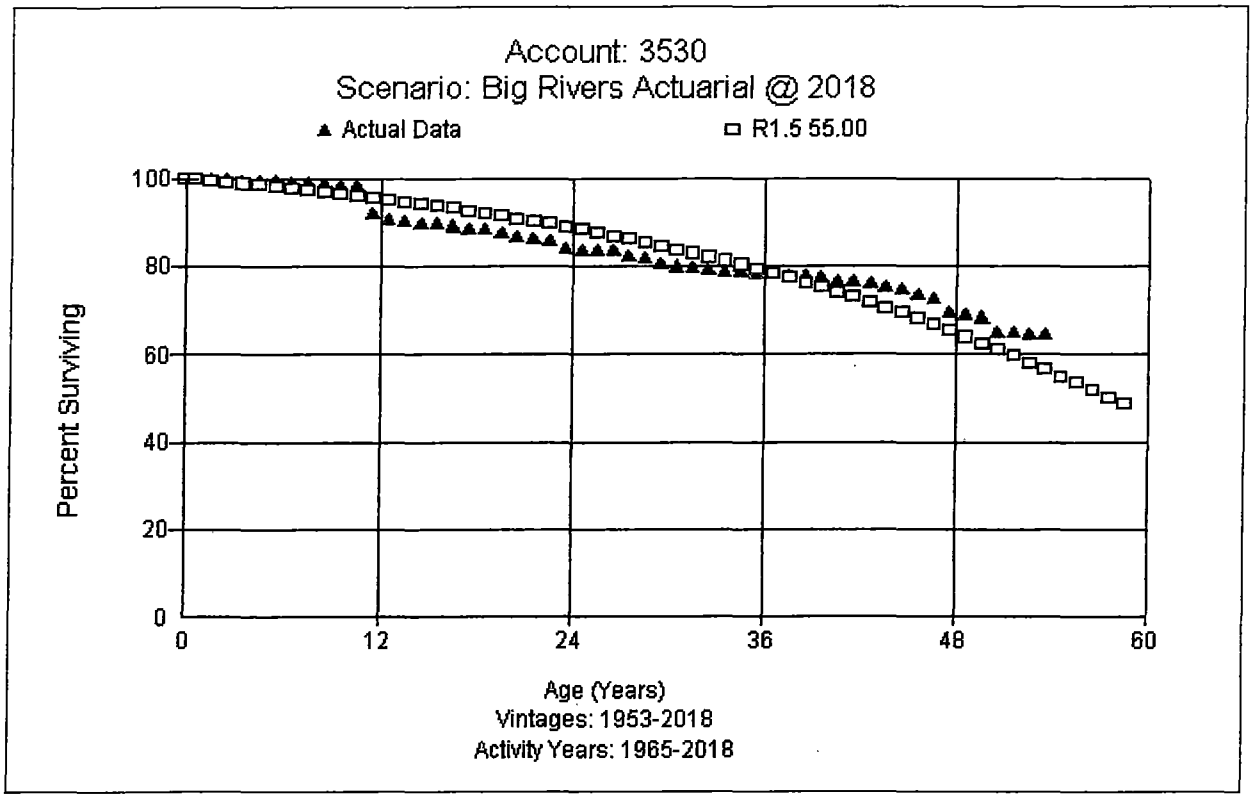


FERC Account 353 Transmission Substation Equipment (55 R1.5)

This account contains a wide variety of transmission substation equipment, from circuit breakers to switchgear and transformers. The account balance for this account at December 31, 2018 is $153 million.

Discussions with Company personnel indicated they currently have 24 substations across the service area. In the next 2-3 years, Company personnel report there will be significant additions to this account. The new substations will have more electronics, SF6 circuit breakers, and newer transformers, all forces which push the life downward. There will be 6 new transformers put in service in the next couple years. Company personnel also report that the life of the existing transformers mimics the oil circuit breaker pattern. They have already had a few SF6 failures. Most, approximately 90%, of the Company's transformers are currently 50 MVAs. The Company is systematically replacing with 100MVAs and taking 50 MVAs out to new substations. Company personnel report that some of the transformers are getting above 50 years old and are not rewound. The Company has no replacement plan due to age, but run to failure. When a transformer fails, the Company must decide either to replace or rewind. Company experts expect 50-60 years or more for transformers, with newer transformers having a shorter life expectancy. Other components have different lives: 50 years for oil circuit breakers in the existing substations and 40-50 years for SF6. The Company is aggressively replacing 69kV relays and moving to electronic. At this time, 30%-35% of the relays are microprocessor relays. Company personnel state that electromechanical relays can be maintained for 30-40 years and that electronic relays may last 20 years. The Company indicated 99% of the insulators in substations are porcelain.

The life analysis indicates the 55 R1.5 is a good fit across the bands. There are both longer and shorter fits, depending on the band analyzed. The study recommends moving to a 55 year life with the R1.5 dispersion for this account based on BREC personnel feedback as well as the analysis and the types and characteristics of assets included in this account. A graph of the observed life table versus the proposed curve is shown below.

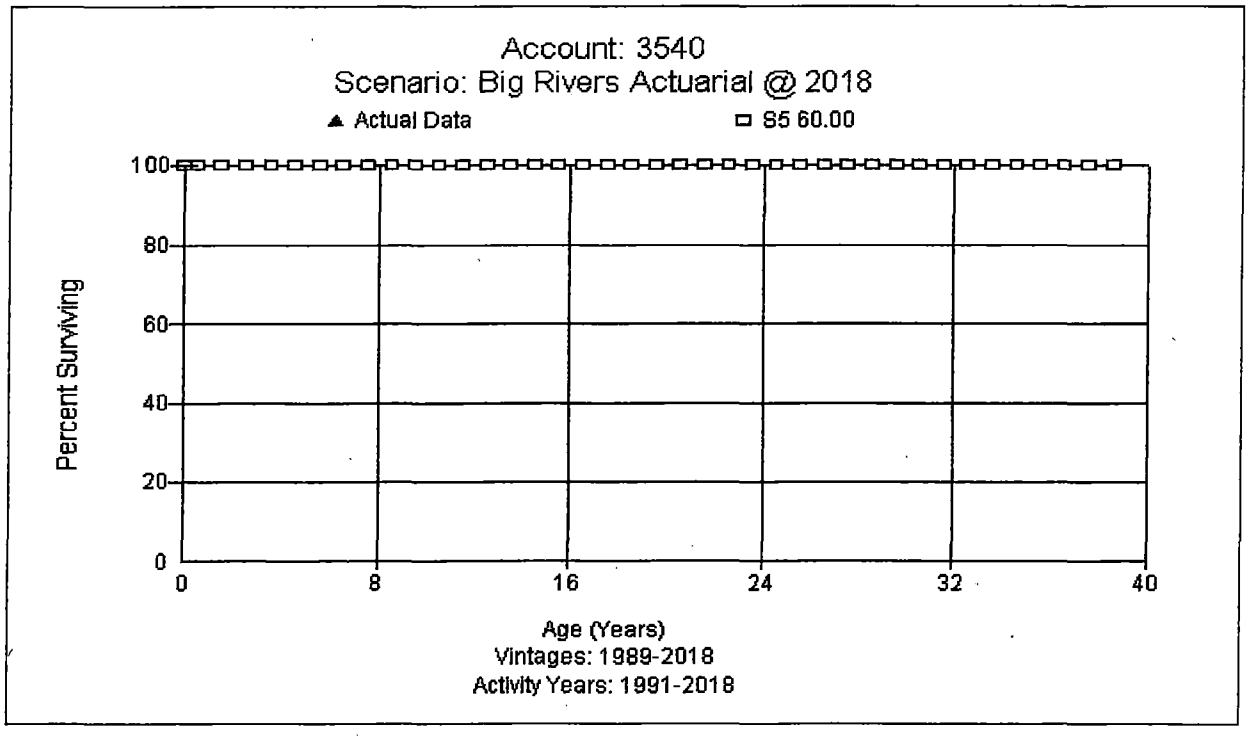

Account: 3530
Scenario: Big Rivers Actuarial @ 2018
Actual Data
R1.5 55.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1953-2018
Activity Years: 1965-2018

FERC Account 354 Transmission Towers and Fixtures (60 S5)

This account consists of Transmission towers, which are used to transmit electricity at a voltage of 69 kV and above. The account balance for this account at December 31, 2018 is $8.6 million.

Discussions with Company personnel indicated BREC has few towers, which are mostly on 345 kV corners, out of substations and river crossings, approximately 100 or 150 total. Nearly all the 345 kV towers were put in around 1982. Few replacements have occurred, but there was at least one tower that collapsed due to ice loading in 2009. Company personnel report that most monopoles are thicker metal, while lattice is a thinner metal. The 69kV switch towers are also included in this account, and one or more have been retired.

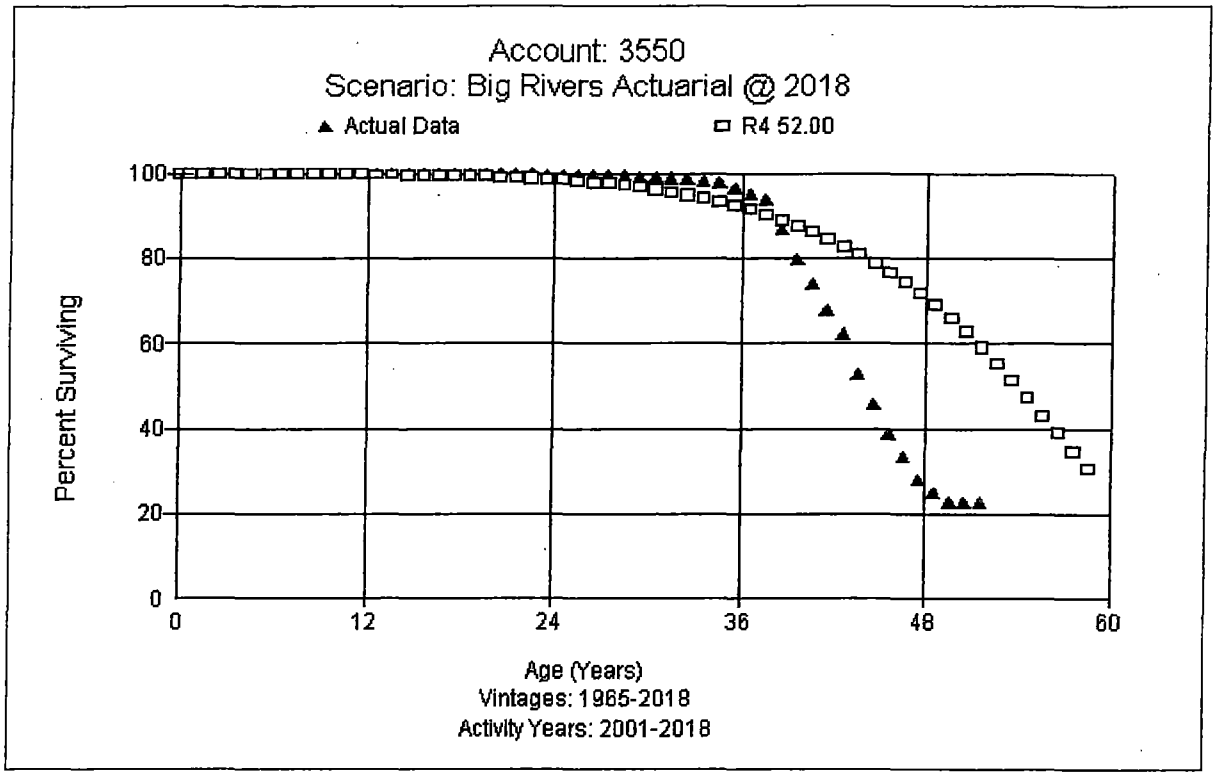
The life analysis observed life table barely moves from 100% due to limited retirement activity. Considering the actuarial analysis of various placement and experience bands, as well as feedback from BREC personnel and judgment based on the type of assets, a 60 year life and the S5 dispersion is recommended for this account. A graph of the observed life table versus the proposed curve is shown below.



FERC Account 355 Transmission Poles and Fixtures (52 R4)

This account consists of Transmission poles and fixtures, which are used to transmit electricity at a voltage of 69 kV and above. The account balance for this account at December 31, 2018 is $54.5 million.

Company personnel indicate the majority (approximately 80%) of the poles are wood. However, they are starting to install more steel poles as compared to wood. All new lines will be steel and when replacing, they will replace wood with steel, which they estimate to be around 100 per year. They are seeing 30-40 years, or occasionally longer, for the life of wood poles in general. They believe that metal poles would have a life of 60 years or perhaps as long as 70 years. They generally install weathered steel for larger installations or ductile iron for smaller installations, for both new construction and replacements. In the accounting system, oldest date is 1981 (which is a conversion issue – some poles are older) and the Company uses FIFO to retire assets. Company engineers believe the average age of a pole is 1980 on the system. However, there could be some poles as old as 1951 vintage. In total, they estimate there are 18,000 poles on the system. Switching structures are lumped into steel poles in the mass property system. Crossarms are separate retirement units. Generally, the Company will not replace poles when reconductoring line for capacity needs. There are perhaps 2 relocations per year due to highway changes or airport expansions. The Company has a pole inspection program and will replace around 100 poles (some years less) a year. The actuarial analysis indicates a steeper dispersion pattern and a shorter life. However, factoring in the move to steel, which is expected to have a longer life, it does not make sense to use a shorter life. Considering the actuarial analysis of placement and experience bands, as well as feedback from BREC personnel, a 52 year life and the R4 dispersion is recommended for this account. A graph of the observed life table versus the proposed curve is shown below.

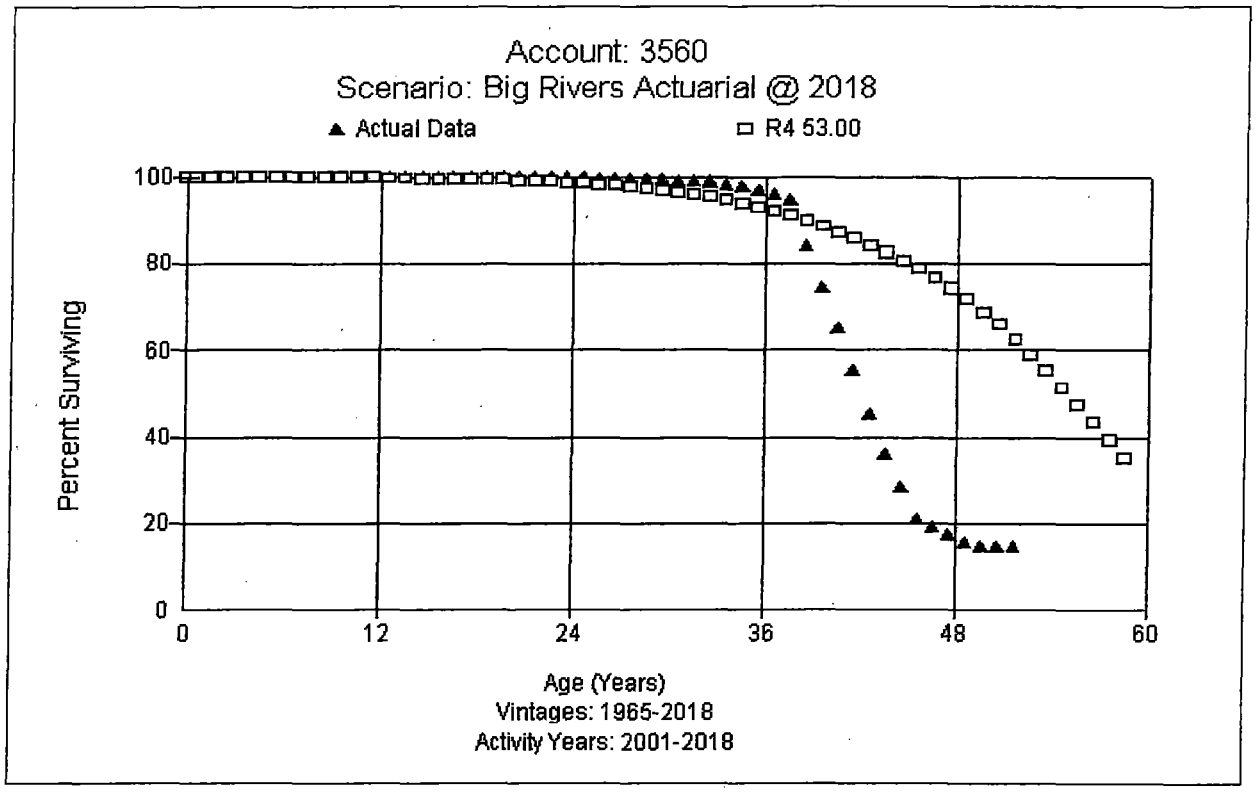

Account: 3550
Scenario: Big Rivers Actuarial @ 2018
▲ Actual Data
□ R4 52.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1965-2018
Activity Years: 2001-2018

FERC Account 356 Transmission Overhead Conductor (53 R4)

This account consists of Transmission overhead conductors, which are used to transmit electricity at voltages of 69 kV and above. The account balance for this account at December 31, 2018 is $50.4 million.

The Company expects conductor to last as long or longer than the poles in Account 355, but static wire will not last as long. Static wire (which has a 30-40 year life) is being replaced with optical ground wire ("OPGW"). Currently only 5% of static wire is OPGW. The Company expects to see an increase in static wire change out in the next 5-7 years. Certain types of property in this account have a shorter life than the conductor, such as interrupters, line switches, insulators (using more polymers, which have a shorter life than ceramic), some switches, and motor operators, with a life of around 20 years. The Company changes out poles without changing out conductor. Conductor replacements generally are related to reconductoring to increase capacity. The Company may retire a line to a particular customer if the load goes away, but the Company will not reuse poles or conductor. There are 1,300 miles of transmission line, and relocations may involve only up to 1 mile per year. Reconductoring may occur for 2-6 miles per year.

The actuarial analysis indicates a steeper dispersion and shorter life. However, there are no operational reasons to reduce the life of the account at this time. Considering the actuarial analysis and input from BREC personnel, this study recommends a 53 year life with the R4 dispersion for this account. A graph of the observed life table versus the proposed curve is shown below.


Account: 3560
Scenario: Big Rivers Actuarial @ 2018
Actual Data
R4 53.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1965-2018
Activity Years: 2001-2018

General Property Plant, FERC Accounts 390-398

For general plant accounts 390, 392.2, 392.3, and 396, BREC proposes to continue using actuarial analysis and normal depreciation accrual rates. For all other General Property plant accounts (391, 393-395, and 397-398), Alliance recommends BREC to implement Accounting Release Number 15 ("AR-15"), which is a vintage year accounting method approved by the FERC in *Vintage Year Accounting For General Plant Accounts*, dated January 1, 1997. AR-15 allowed utilities to use a simplified method of accounting for general plant assets, excluding structures and improvements (referred to as "general plant"). The AR-15 release allowed high volume, low cost assets to be amortized over their associated useful life, eliminated the need to track individual assets, and allowed a retirement to be booked at the end of the depreciable life. This method is often referred to as "amortization of general plant." The plant asset balances are maintained by vintage installed with the retirement being recorded when the asset vintage is fully accrued. Although actuarial or semi-actuarial analysis will no longer be available, the determination of useful life can be made appropriately with the use of market forces, manufacturer expected life, technological obsolescence, business planning, known causes of retirement, and changes in expected future utilization.

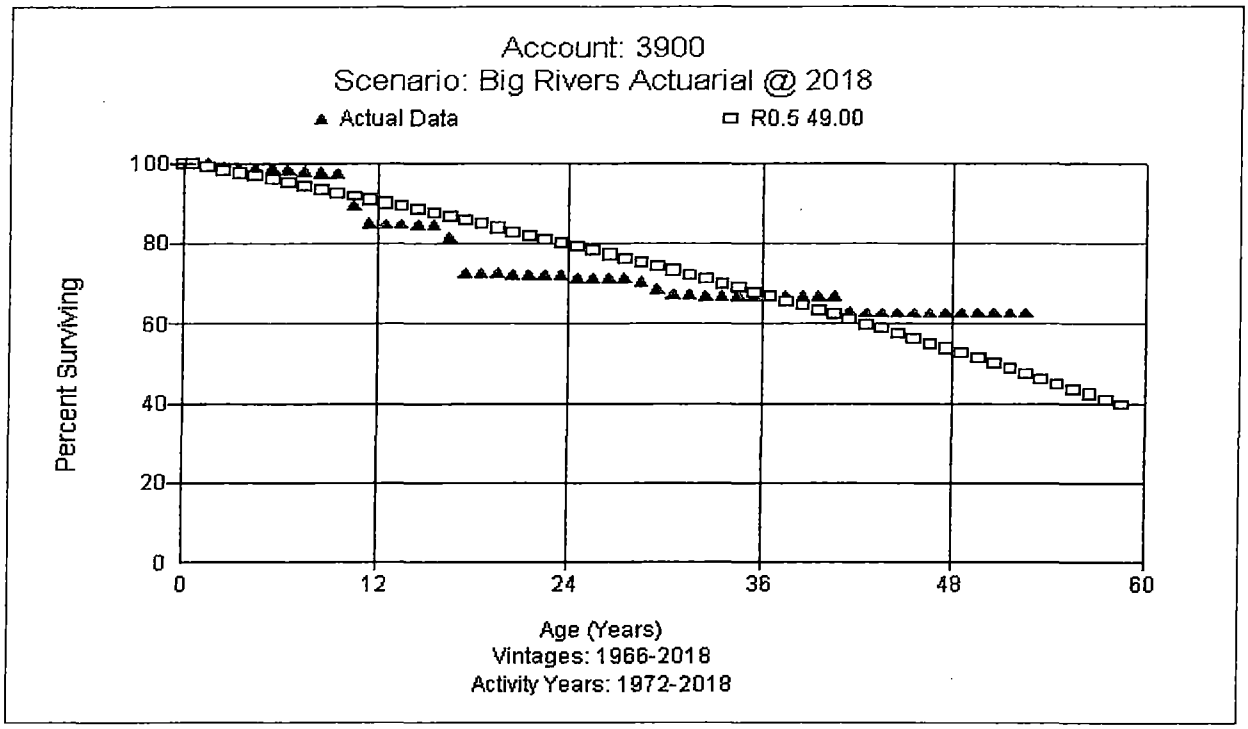
The depreciation calculation uses a useful life applied to a vintage versus the entire account. The depreciation recovery is complete when the vintage accumulated depreciation is equal to the vintage plant adjusted for estimated salvage and removal costs.

FERC Account 390 General Structures and Improvements (49 R0.5)

This account consists of general structures and improvements for buildings, including roofing, plumbing, and air conditioning systems. The plant balance for this account at December 31, 2018 is $6.0 million.

Discussions with Company personnel indicate it is starting to replace some assets in this account like HVAC, roofs, and major remodels such as the training center in 2010. In 2019, the Company will be replacing the air handler that was originally installed in 1966. No other large capital replacements are planned in the near future with the exception of some remodel projects. A large parking lot will be replaced in 2020. In 2017, the Company completed extensive updates to the Headquarters building including repainting the exterior, replacing signage and entry doors, and added security glass. The Company headquarters building is now 40-45 years old. The oldest portion of the building dates from 1962, another portion was added in 1968, and the 4 story portion was constructed in the mid-1970s. There are no plans to change at this time.

After discussions with Company personnel and judgment, this study recommends a 49 year life with R0.5 dispersion for this account. A graph of the observed life table versus the proposed curve is shown below.

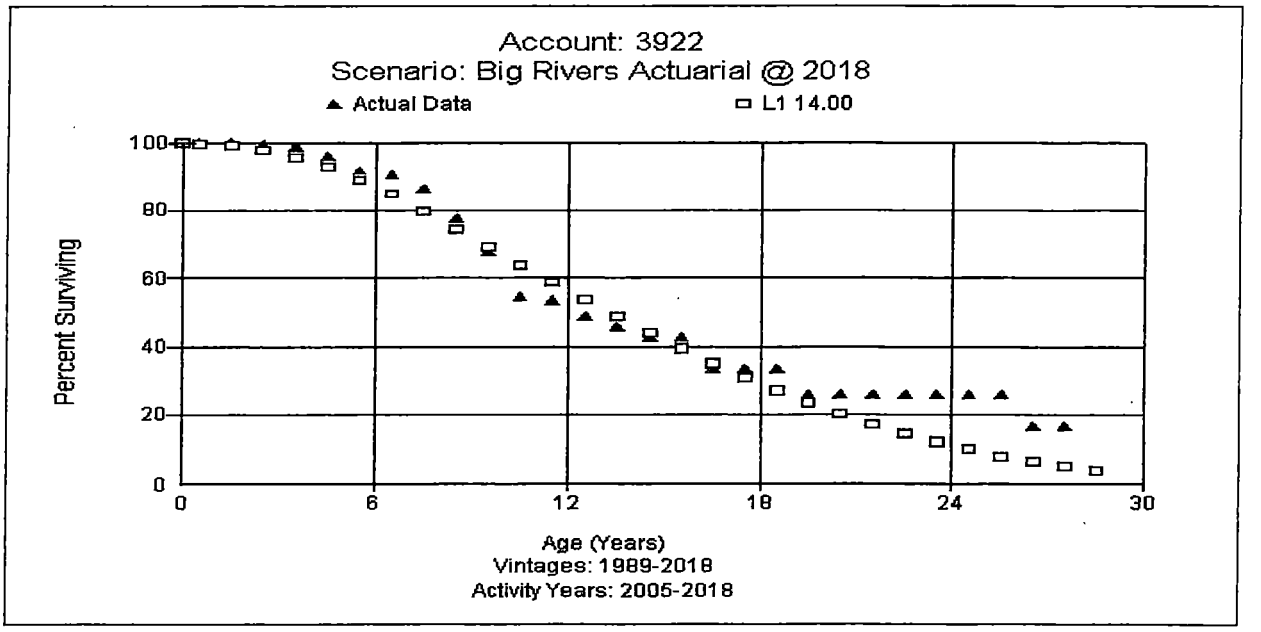

Account: 3900
Scenario: Big Rivers Actuarial @ 2018
Actual Data
R0.5 49.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1966-2018
Activity Years: 1972-2018

FERC Account 392.2 Transportation Equipment General (14 L1)

This account consists of automobiles, trucks, and other transportation that support general utility operations. There is approximately $3.3 million in this account at December 31, 2018.

Discussions with Company personnel report that the life cycle policy is changing. Pickups get handed down to other departments and end up at the power plants. Typically, when a vehicle reaches 125,000 miles, the Company will begin to look at replacement. Trucks have a longer life than cars. If trucks are used in Transmission, then move to Production, those assets could last up to 15 years. The Company has five cars in the pool and dozens in the truck fleet. In 2019, Transmission fleet retired 2001 and 2002 vehicles. Company personnel believe that 18-20 years is the maximum life for the lighter trucks and heavier trucks can see a 20-22 year life or more. In both Transmission and General, the smaller service and supervisor vehicles are moved out to the plant which would extend the life. This methodology has been in place for a while.

The life was shorter several years ago and this is exhibited in the data and life analysis. After reviewing various placement and experience bands, this study recommends a 14 year life with the L1 dispersion. A graph of the observed life table and the proposed curve and life is shown below.

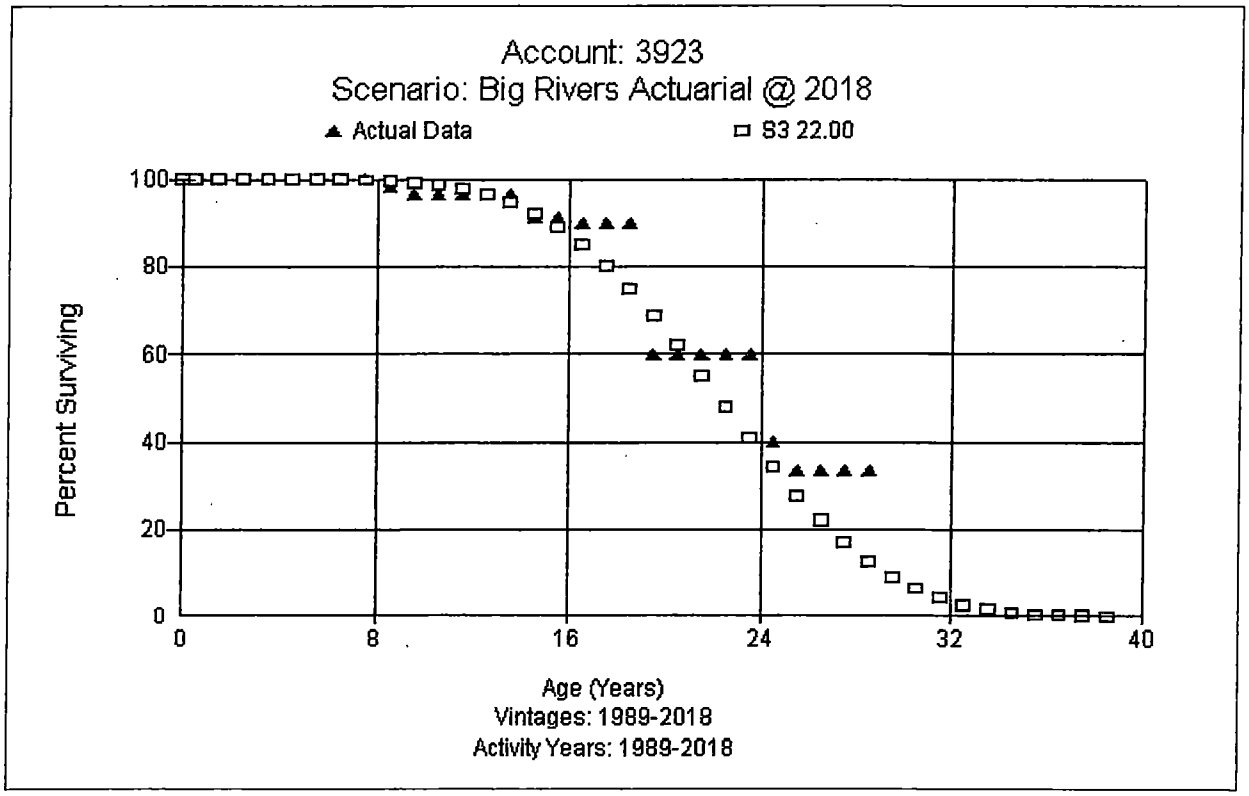


FERC Account 392.3 Transportation Equipment – Transmission (22 S3)

This account consists of autos, trucks, and other equipment used to support transmission operations. There is approximately $1.9 million in this account at December 31, 2018.

Discussions with Company personnel indicated that 20 or more years is a reasonable life expectation for a big bucket or line truck.

The life analysis has fits between 21 and 25 years, with the 22 S3 being a consistent good fit across the bands analyzed. After reviewing various placement and experience bands, this study recommends moving to a 22 year life with the S3 dispersion. A graph of the observed life table and the proposed curve and life is shown below.

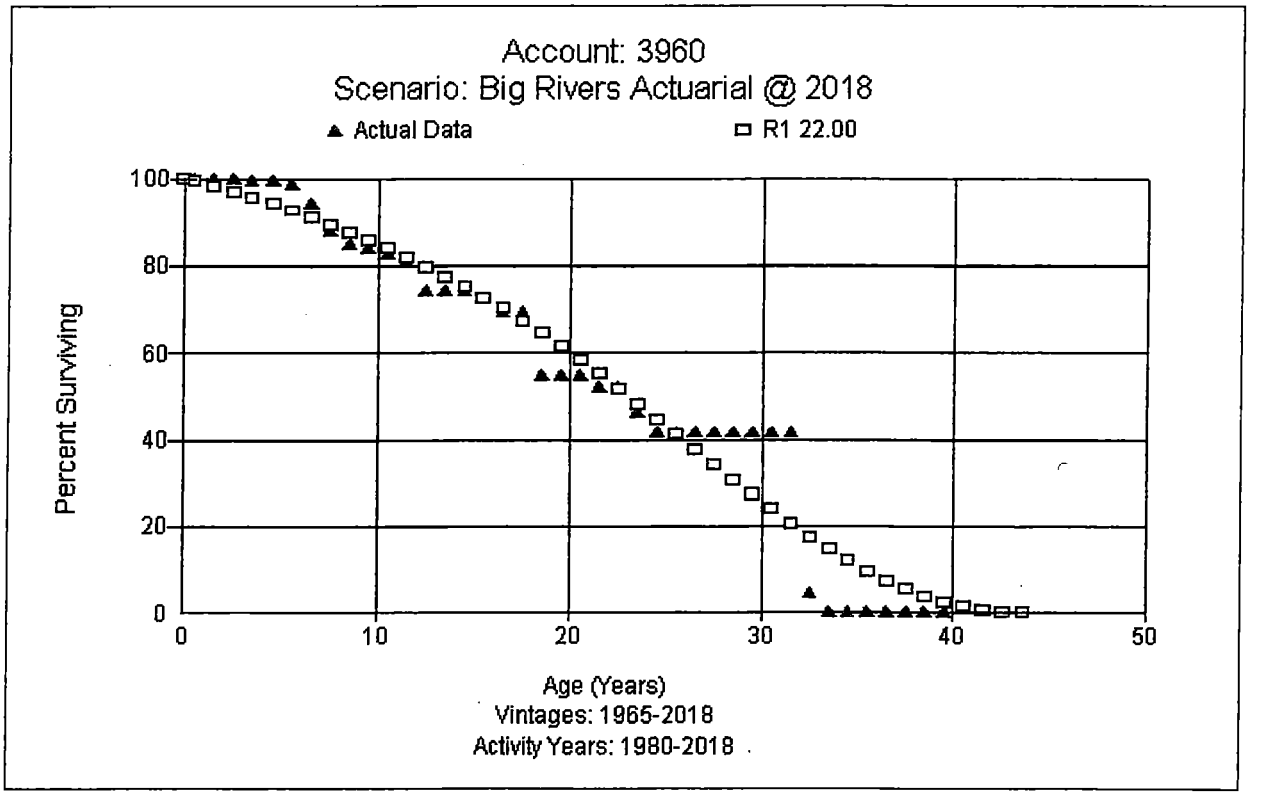


FERC Account 396 Power Operated Equipment (22 R1)

This account consists of power-operated equipment such as bulldozers, forklifts, pile drivers, and tractors. There is approximately $1.4 million in this account at December 31, 2018.

Company personnel expect that forklifts, trailers, and gators would have about a 15 year life. Bulldozers and backhoes would have a longer life. Boom equipment on a bulldozer would have a life of approximately 30 years. Based on the various life expectations, a life of 20 or more years is reasonable for the account.

The fuller band life analysis indicates a life between 20-23 years. More recent bands show the life pushing longer than what would be a reasonable expectation for the assets. After reviewing various placement and experience bands, this study recommends a 22 year life with the R1 dispersion. A graph of the observed life table and the proposed curve and life is shown below.



GENERAL PLANT AMORTIZED ACCOUNTS

Adoption of Vintage Group Amortization

This study recommends the adoption of vintage group amortization for certain General plant accounts. FERC adopted Accounting Release 15 in 1997 using the following criteria:

1. The individual classes of assets for which vintage year accounting is followed are high volume, low value items;

2. There is no change in existing retirement unit designations, for purposes of determining when expenditures are capital or expense;

3. The cost of the vintage groups is amortized to depreciation expense over their useful lives and there is no change in depreciation rates resulting from the adoption of the vintage year accounting;

4. Interim retirements are not recognized;

5. Salvage and removal cost relative to items in the vintage categories are included in the accumulated depreciation account and assigned to the oldest vintage first; and

6. Properties are retired from the affected accounts that, at the date of the adoption of vintage year accounting, meet or exceed the average service life of properties in that account.

A vintage year method of accounting for the general plant accounts that meets all of the foregoing requirements may be implemented without obtaining specific authorization from the Commission to do so.

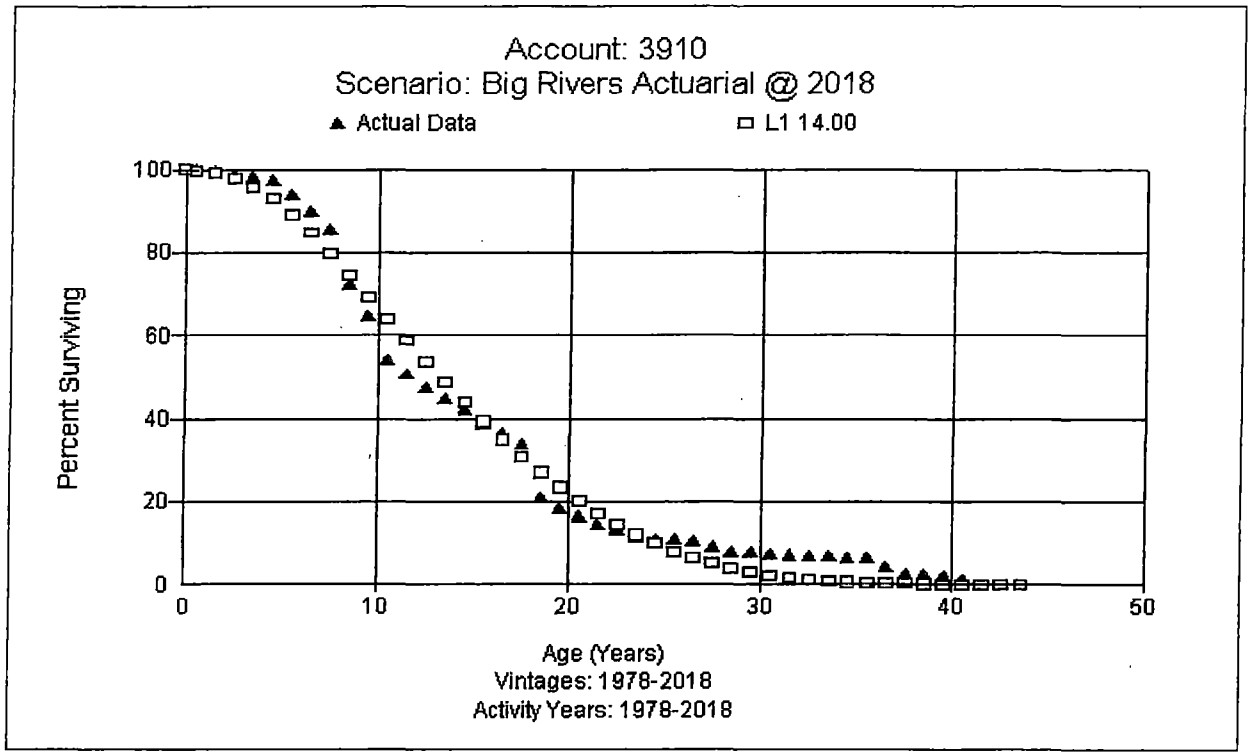
To implement this amortization mechanism, it is necessary to first retire the assets whose age is longer than the recommended service life for each group. Those amounts are shown for each account in Appendix A-2. It will no longer be necessary to track location and retirement of the assets. After retirement, the remaining plant in service for each account will be amortized using the amortization rates shown in Appendix A-2 and B. Annually, assets reaching the average service life of each account will be retired. An additional accrual is necessary for each plant account to make up the difference between the book reserve and the theoretical reserve. Those amounts will be accrued until the total reserve difference for each account shown in Appendix A-2 is recovered.

FERC Account 391, 391.6 and 391.7 Office Furniture and Equipment (14 SQ)

This account consists of miscellaneous office furniture such as desks, chairs, filing cabinets, and tables used for general utility service. There is approximately $821 thousand in this account, and after retirement of fully accrued assets the plant balance at December 31, 2018 would be $642 thousand.

Discussions with Company personnel indicated much of the older assets were purchased under a $500 capitalization threshold. In 1998, a large amount was retired due to a capitalization threshold change. Also in the 1998-2000 timeframe there was a shift in the number of people at the facility, which was related to a lease agreement. This event resulted in retirements of furniture and equipment. Most of the assets in the account have a 15 year life.

The life analysis fits are 9 to 16 years, depending on the band analyzed. Considering the type of assets, input from Company personnel, and the analysis, this study recommends a 14 year life (modeled with the L1 dispersion). After implementation of vintage group amortization, the SQ curve is used to calculate the rate. A graph of the observed life table versus the recommended life is shown below.



FERC Account 391.2 Network Equipment (15 SQ)

This account consists of network computer equipment used for general utility service. There is approximately $1.6 million in this account, and after retirement of fully accrued assets the plant balance at December 31, 2018 would be $1.5 million.

Discussions with Company personnel indicated they have standardized assets with Cisco equipment and state that the assets in this account will have an expected life of 15 years. Most equipment achieved a little over 15 years, but the Company replaced all equipment in 2018.

Based on Company information, plans, and judgment, this study recommends a life of 15 years with an SQ dispersion. No graph is provided.

FERC Account 391.2 PCs, Servers, Printers (7 SQ)

This account consists of personal computers, servers, printers, and other similar computer equipment used for general utility service. There is approximately $6.6 million in this account, and after retirement of fully accrued assets the plant balance at December 31, 2018 would be $3.9 million.

Discussions with Company personnel provided the life for the following components: PC and laptops 5 years, printers 7 years, servers 7 years, and network storage equipment 10 years. Based on a weighting of the component lives in this group, this study recommends an overall average service life of 7 years with an SQ dispersion. No graph is provided.

FERC Account 391.2 Non-Enterprise Software (5 SQ)

This account consists of non-Enterprise computer software used for general utility service. There is approximately $3.9 million in this account, and after retirement of fully accrued assets the plant balance at December 31, 2018 would be $1.7 million.

Software in this group includes systems such as EMS, SCADA, and GIS. Company personnel state that these assets are upgraded every 5 years and old assets are retired. Based on Company information, plans, and judgment, this study recommends a life of 5 years with an SQ dispersion. No graph is provided.

FERC Account 391.2 Enterprise Software (15 SQ)

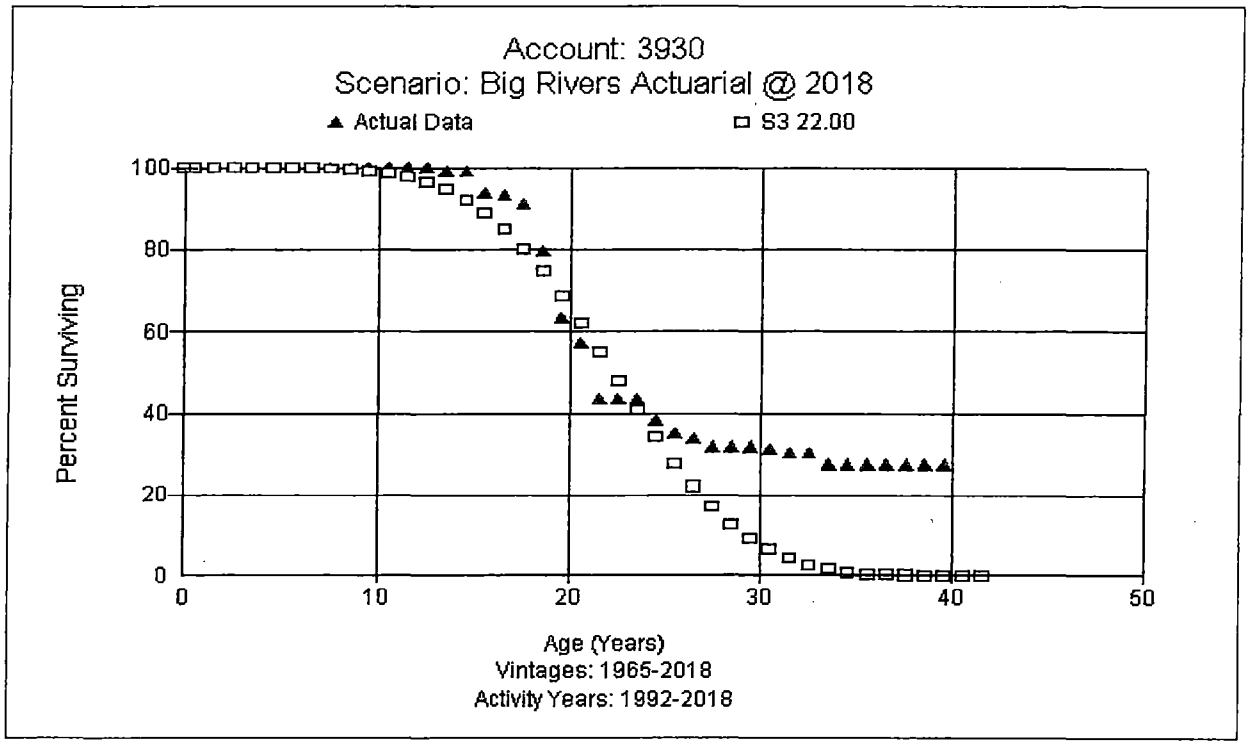
This account consists of Oracle, Hyperion, and other enterprise software used for general utility service. There is approximately $14.7 million in this account. However, after AR-15 retirements are made due to assets exceeding their recommended life, the balance in this account would be approximately $14.5 million at December 31, 2018.

Discussions with Company personnel indicated they have already moved to third party support for Oracle and don't intend to upgrade it any longer. They do not capitalize Microsoft operating systems or Office. Company personnel recommend a 15 year life for this account. Considering the input from Company personnel and judgment, this study recommends a life of 15 years with an SQ dispersion. No graph is provided.

FERC Account 393 Stores Equipment (22 SQ)

This account consists of stores equipment used for general utility service. There is approximately $111 thousand in this account. However, after AR-15 retirements are made due to assets exceeding their recommended life, the balance in this account would be approximately $57 thousand at December 31, 2018.

The life analysis, in the full band analyzed, has a good fit with the 22 S3. More recent bands would indicate a life much longer than what is reasonable for the type of assets. Considering the type of assets and the life analysis, this study recommends a 22 year life (modeled with the S3 dispersion). At implementation of vintage group amortization, the SQ curve will be used to calculate the depreciation rate, since all assets will retire when they reach the recommended average service life. A graph of the observed life table versus the recommended life is shown below.

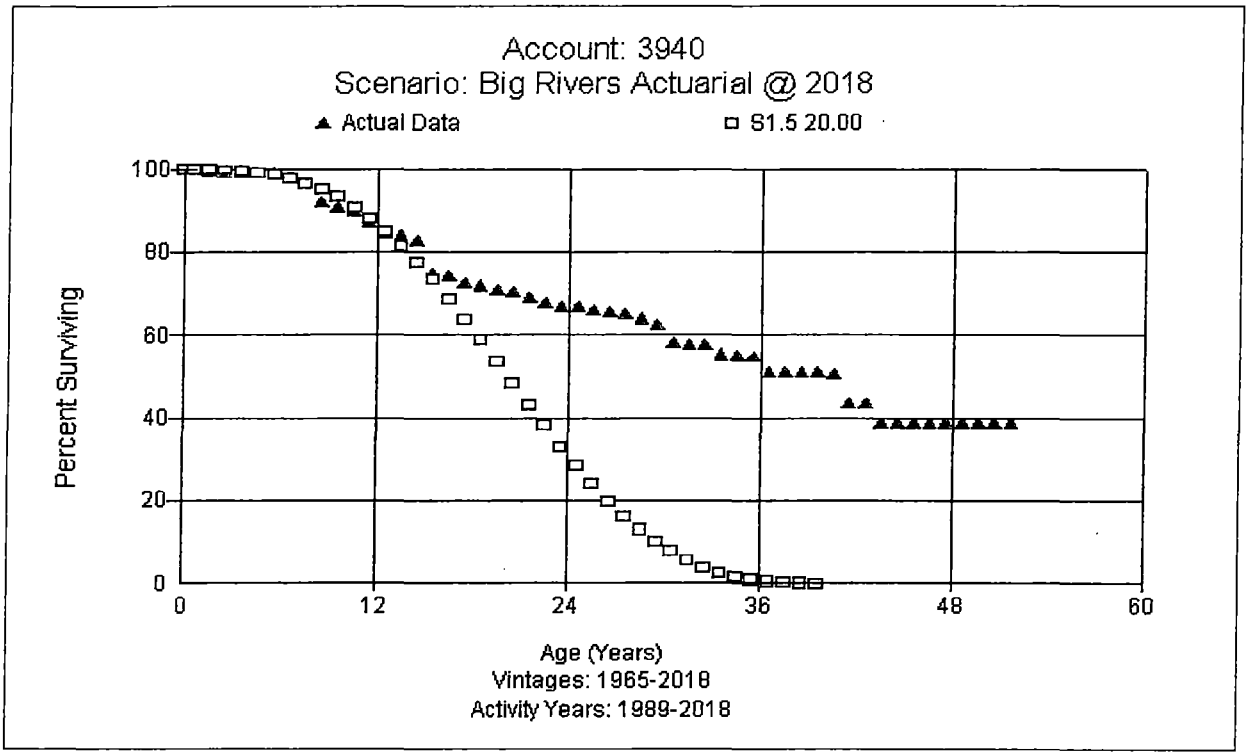


FERC Account 394 Tools, Shop, and Garage Equipment (20 SQ)

This account consists of various items or tools used in shops and garages such as air compressors, grinders, mixers, hoists, and cranes. There is approximately $1.0 million in this account at December 31, 2018. However, after AR-15 retirements are made due to assets exceeding their recommended life, the balance in this account would be $679 thousand.

Discussions with Company personnel report the lives for some of the equipment as follows: testers approximately 10 years, the oil treatment trailer approximately 20-30 years, and most of the other tools are estimated to last less than 20 years. It is possible that the Company is not effectively retiring assets from the books, which supports the implementation of vintage group amortization.

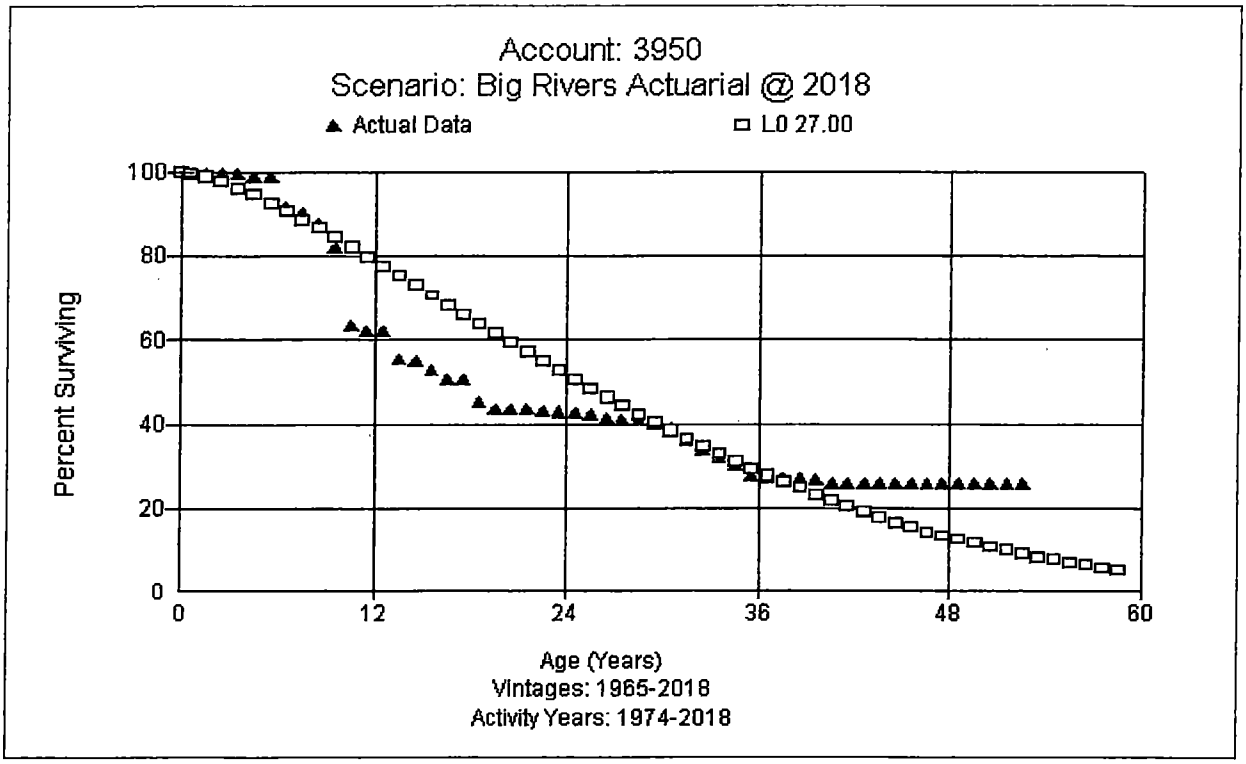
The life analysis does indicate a much longer life than what is reasonable for the type and use of the assets. Considering the analysis, input from Company personnel, and judgment, this study recommends a 20 year life (modeled with the S1.5 dispersion). At implementation of vintage group amortization, the SQ curve will be used to calculate the depreciation rate, since all assets will retire when they reach the recommended average service life. A graph of the observed life table versus the recommended life is shown below.


Account: 3940
Scenario: Big Rivers Actuarial @ 2018
Actual Data
S1.5 20.00
Percent Surviving
100
80
60
40
20
0
0
12
24
36
48
60
Age (Years)
Vintages: 1965-2018
Activity Years: 1989-2018

FERC Account 395 Laboratory Equipment (27 SQ)

This account consists of laboratory equipment used in general utility service. There is approximately $485 thousand in this account at December 31, 2018. However, after AR-15 retirements are made due to assets exceeding their recommended life, the balance in this account would be $364 thousand.

The life analysis indicates a life around 23-27 years with a predominant L dispersion. Considering the type of assets and the analysis, this study recommends a 27 year life (modeled with the L0 dispersion). At implementation of vintage group amortization, the SQ curve will be used to calculate the depreciation rate, since all assets will retire when they reach the recommended average service life. A graph of the observed life table versus the recommended life is shown below.

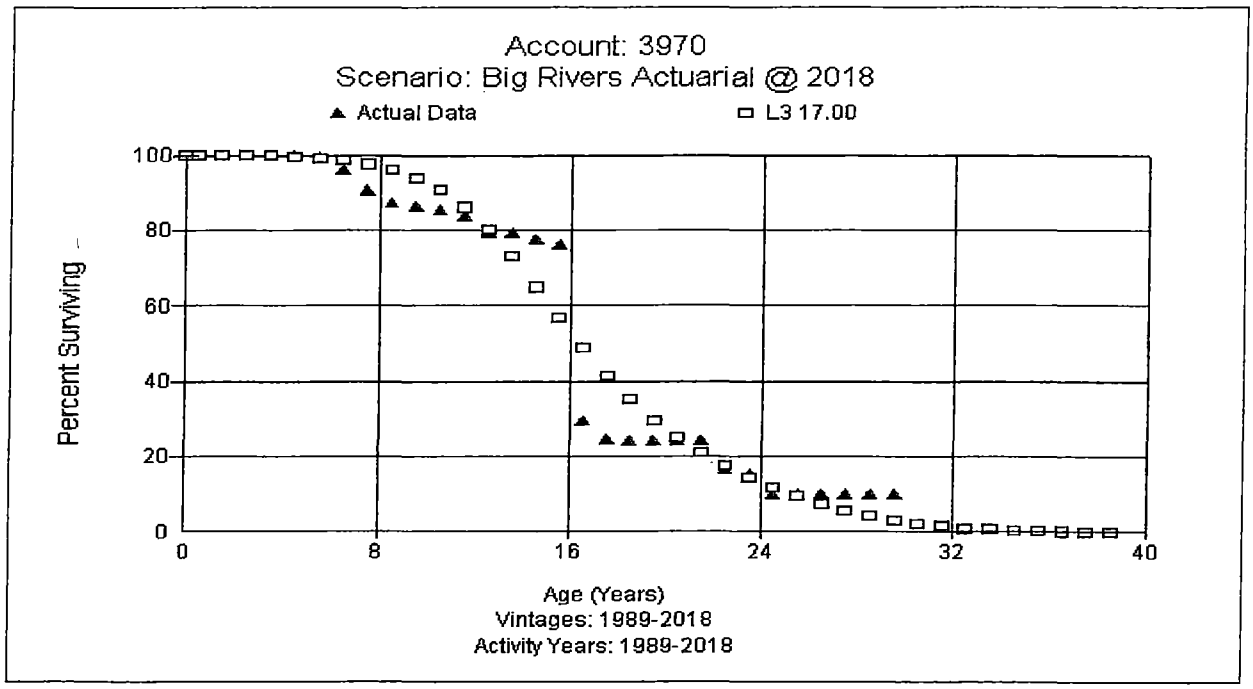


FERC Account 397 Communication Equipment (17 SQ)

This account consists of the microwave system, phone systems, and 2-way radio communication systems used in general utility service. There is approximately $10.6 million in this account at December 31, 2018. However, after AR-15 retirements are made due to assets exceeding their recommended life, the balance in this account would be $10.0 million.

Discussions with Company personnel estimate a life of 15 years for both the electronic components of microwave systems and phone switches. A longer life is expected for dishes and hardware, however a life of 10-15 years is expected for communication switches at a substation. The previous 2-way system was over 30 years old, but the new system is very different, and is expected to last up to 20 years. However, it will not be under warranty and parts will be difficult to purchase. The bulk of the investment in the account is the new 2-way system. The Company has a long term plan to start retiring microwave systems over the next 5 years or more and will gradually convert links to fiber.

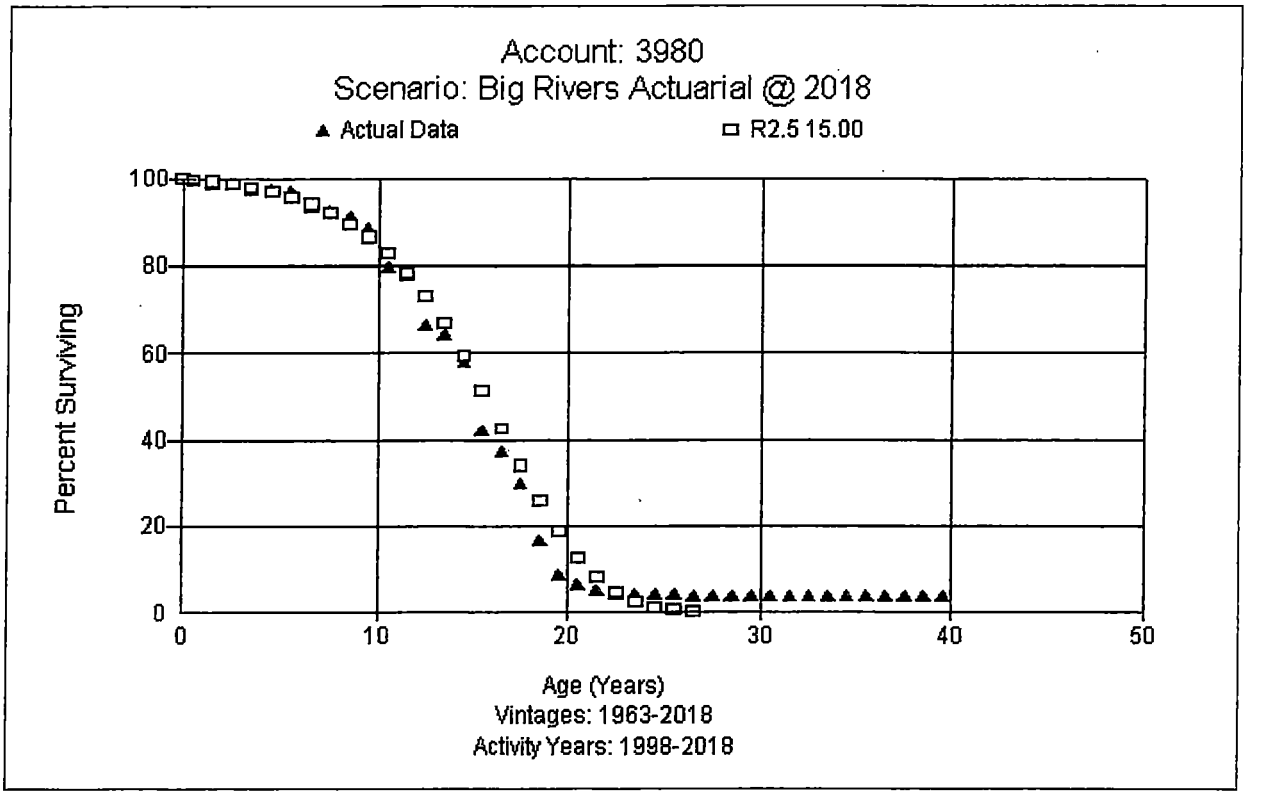
The life analysis, in the full bands, indicates a slightly longer life. The more recent bands have a good fit with a 17 L3, which is more reflective of future expectations for the assets in the account. Based on input from BREC subject matter experts and judgment, this study recommends moving to a 17 year life (modeled with the L3 dispersion). At implementation of vintage group amortization, the SQ curve will be used to calculate the depreciation rate, since all assets will retire when they reach the recommended average service life. A graph of the observed life table versus the recommended life is shown below.


Account: 3970
Scenario: Big Rivers Actuarial @ 2018
Actual Data
L3 17.00
Percent Surviving
100
80
60
40
20
0
0
8
16
24
32
40
Age (Years)
Vintages: 1989-2018
Activity Years: 1989-2018

FERC Account 398 Miscellaneous Equipment (15 SQ)

This account consists of miscellaneous equipment used in general utility service. There is approximately $543 thousand in this account at December 31, 2018. However, after AR-15 retirements are made due to assets exceeding their recommended life, the balance in this account would be $484 thousand.

The life analysis has a mix of longer and shorter life indications depending on the band. In the fuller bands, a good fit is the 15 R2.5. Considering the type of assets and the analysis, this study recommends a 15 year life (modeled with the R2.5 dispersion pattern). At implementation of vintage group amortization, the SQ curve will be used to calculate the depreciation rate, since all assets will retire when they reach the recommended average service life. A graph of the observed life table versus the recommended life is shown below.



SALVAGE ANALYSIS

When a capital asset is retired, physically removed from service, and finally disposed of, terminal retirement is said to have occurred. The residual value of a terminal retirement is called gross salvage. Net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset).

Gross salvage and cost of removal related to retirements are recorded to the general ledger in the accumulated provision for depreciation at the time retirements occur within the system.

Net salvage data by plant account for Transmission and General Property plant is shown in Appendix E. Removal cost percentages are calculated by dividing the current cost of removal by the original installed cost of the asset. Some plant assets can experience significant negative removal cost percentages due to the timing of the addition versus the retirement. For example, a Transmission asset in FERC Account 353 with a current installed cost of $500 (2018) would have had an installed cost of $39.02[3] in 1963. A removal cost of $50 for the asset calculated (incorrectly) on current installed cost would only have a negative ten percent removal cost ($50/$500). However, a correct removal cost calculation would show a negative 128 percent removal cost for that asset ($50/$39.02). Inflation from the time of installation of the asset until the time of its removal must be taken into account in the calculation of the removal cost percentage because the depreciation rate, which includes the removal cost percentage, will be applied to the original installed cost of assets.

3 Using the Handy-Whitman Bulletin No. 189, E-2, line 34, $39.02 = $500 x 64/820.

Salvage - Steam Production and Other Production Property

The concept behind the net salvage cost component of depreciation rates for power plants is different from that of Transmission assets. Power plants are discrete units that will need to be dismantled after the end of their useful lives. Because of this, instead of statistically analyzing the historical cost for salvaging and removing assets with rolling and shrinking bands, engineering studies are conducted to determine the cost to dismantle the individual units or plants. This study does not include dismantling estimates for the various BREC power plants. Interim net salvage history is used as a proxy in this study for final dismantlement estimates. Interim net salvage history for each plant account is shown in Appendix E.

Interim Net Salvage, FERC Accounts 311-316

FERC Account 311.0 Structures and Improvements (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with buildings, structures, fences, lighting systems, and other related assets at each power plant. Appendix E shows the most recent five and ten year bands show a net salvage percentage of negative 4 and negative 15 percent respectively. Based on history and judgment, this study recommends selecting a percentage slightly above the lowest negative indication and us a negative five percent for this account.

FERC Account 312.0 Boiler Plant Equipment (Negative 10 percent)

This account consists of any gross salvage or removal cost associated with boiler plant equipment, bag houses, preheaters, and other related equipment. Appendix E shows the most recent five and ten year bands show a net salvage percentage of negative 24 and negative 15 percent respectively. Based on history and judgment, this study recommends a more negative net salvage, but not as negative as the analysis indicates. A negative 10 percent is proposed for this account.

FERC Account 312.0 (A-K) Boiler Plant Equipment Environmental (Negative 15 percent)

This account consists of any gross salvage or removal cost associated with boiler plant equipment associated with environmental compliance items. Appendix E shows the most recent five and ten year bands show a net salvage percentage of negative 19 and negative 24 percent respectively. The 10-year indications are more negative than Account 312 alone, but are consistent in the 10 year moving averages in prior years. Based on history and judgment, this study recommends following the more negative indications with a negative 15 percent for this account.

FERC Account 312.0 (L-P) Boiler Plant Equipment Environmental Short Life (Negative 15 percent)

This account consists of any gross salvage or removal cost associated with boiler plant equipment associated with short lived environmental compliance items. This equipment has experience from 2012-2018. Appendix E shows the seven year band has a net salvage percentage of negative 14 percent. However, the most recent 3-6 year bands have a negative 12-19 percent. Based on history and judgment, this study recommends negative 15 percent net salvage for this account.

FERC Account 312.0 (Q-Z) Boiler Plant Equipment Short Life (Negative 15 percent)

This account consists of any gross salvage or removal cost associated with boiler plant equipment associated with short-lived assets. This equipment has experience from 2011-2018. Appendix E shows the eight year band has a net salvage percentage of negative 10 percent. However, the most recent 4-7 year bands have a negative 14-16 percent. Based on history, experience with the other 312 sub-accounts, and judgment, this study recommends negative 15 percent net salvage for this account.

FERC Account 314.0 Turbogenerator Equipment (Negative 2 percent)

This account consists of any gross salvage or removal cost associated with turbogenerator equipment, stationary blades, turbine control systems, and other related

assets at each power plant. Appendix E shows the most recent five and ten year bands show a net salvage percentage of positive 2 and negative 2 percent respectively. The salvage recorded in 2017 is impacting the most recent results. Based on the most recent 10-year moving average and judgment, this study recommends negative two percent net salvage for this account.

FERC Account 315.0 Accessory Electric Equipment (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with power transformer, regulators, and related assets at each power plant. Appendix E shows the most recent five and ten year bands show a net salvage percentage of 0 and negative 9 percent respectively. Based on the more consistent 10-year averages and judgment, this study recommends negative five percent net salvage for this account.

FERC Accounts 316.0 Miscellaneous Power Plant Equipment (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with tanks, pumps, work equipment, and other related assets at each power plant. Appendix E shows the most recent five and ten year bands show a net salvage percentage of positive 7 and negative 22 percent respectively. The negative 22 percent is much more negative than most of the industry sees for this account. Considering the analysis and judgment, this study recommends negative five percent net salvage for this account.

Net Salvage, FERC Accounts 340-345

FERC Account 341.0 Structures and Improvements (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with buildings, structures, fences, lighting systems, and other related assets at the CT unit. There have been a small number of retirements in this account. Expectations for this account would be that cost of removal would exceed any salvage at retirement. Based on judgment, this study recommends negative five percent net salvage for this account.

FERC Account 342.0 Fuel Holders and Accessory Equipment (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with pumps, storage tanks, natural gas/fuel oil piping, and other related assets at the CT unit. Appendix E shows the most recent five and ten year bands show a negative 12 and negative 38 percent respectively. This is more negative than many other utilities experience for this account. Considering the analysis indications, but moderating with judgment, this study recommends negative five percent net salvage for this account.

FERC Account 343.0 Prime Movers (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with foundations, chimneys, demineralizers, fire protection systems, and other related assets at the CT unit. There have been a small number of retirements in this account. Expectations for this account would be that cost of removal would exceed any salvage at retirement. Based on judgment, this study recommends negative five percent net salvage for this account.

FERC Account 344.0 Generators (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with generators and other related assets at the CT unit. There have been a small number of retirements in this account. Expectations for this account would be that cost of removal would exceed any salvage at retirement. Based on judgment, this study recommends negative five percent net salvage for this account.

FERC Account 345.0 Accessory Electric Equipment (Negative 5 percent)

This account consists of any gross salvage or removal cost associated with power transformer, regulators, and related assets at the CT unit. There have been a small number of retirements in this account. Expectations for this account would be that cost of removal would exceed any salvage at retirement. Based on judgment, this study recommends negative five percent net salvage for this account.

Salvage - Transmission Property

Increasing levels of removal cost are experienced in nearly all accounts in this function. Moving averages, which smooth out yearly fluctuations between retirements and net salvage, are used to examine data over the 1971 to 2018 period (or newer depending on the account) and determine net salvage estimates for each account. Detailed analysis and results by account are shown in Appendix E and individual account results are discussed below.

FERC Account 352 Transmission Substation Structures and Improvements (Negative 5 percent)

This account includes gross salvage and removal cost associated with buildings, fencing, and other structures found in a transmission substation. In the most recent transaction year, negative 11 and negative 10 percent exist for the five-year and 10-year bands, respectively. Looking at the prior years moving averages, a moderate move is reasonable at this time. Based on judgment and Company history, this study recommends following those indications with a net salvage of negative five percent for this account.

FERC Account 353 Transmission Station Equipment (0 percent)

This account includes gross salvage and removal cost associated a wide variety of transmission substation equipment, from circuit breakers to switchgear and transformers. In the most recent period, a moving average of positive 5 percent and a positive 4 percent for the 5 and 10-year bands, respectively. The overall average for this account is positive 1 percent. Considering the movement between some negative net salvage and positive net salvage over the historical experience, along with judgment, this study recommends zero percent for this account.

FERC Account 354 Transmission Tower and Fixtures (Negative 5 percent)

This account consists of gross salvage and removal cost for Transmission towers, which are used to transmit electricity at a voltage of 69 kV and above. There is a small level of retirement activity for this account. Expectations for this account would be that cost of removal would exceed any salvage at retirement. This study recommends reflecting a

small amount of removal cost with a negative five percent net salvage estimate for this account.

Account 355 Transmission Poles and Fixtures (Negative 25 percent)

This account consists of gross salvage and removal cost for Transmission poles and fixtures, which are used to transmit electricity at a voltage of 69 kV and above. There is a small amount of historical experience from 2011-2018 for this account. The eight year overall average shows negative 146 percent. Expectations for this account would be that cost of removal would continue to exceed any salvage, at retirement, in the future. This study recommends following the direction of this trend with negative 25 percent net salvage for this account.

FERC Account 356 Transmission Overhead Conductor (Negative 20 percent)

This account consists of gross salvage and removal cost for Transmission overhead conductors, which are used to transmit electricity at voltages of 69 kV and above. There is a small amount of historical experience from 2011-2018. The eight year overall average shows negative 90 percent. Expectations for this account would be that cost of removal would continue to exceed any salvage, at retirement, in the future. This study recommends following the direction of this trend with negative 20 percent net salvage for this account.

Salvage – General Property

Accounts in the general function currently have a zero percent net salvage value. For General Property plant accounts 391, 393-395, and 397-398, BREC will implement the use of AR-15 using the study recommended net salvage parameters. Detailed analysis and results by account are shown in Appendix E and individual account results are discussed below.

FERC Account 390 Structures and Improvements (Negative 5 percent)

This account consists of gross salvage and removal cost associated with buildings, including roofing, plumbing, and air conditioning systems. The most recent five and ten year moving average show negative 17 and negative 7 percent net salvage, respectively. This study recommends following the negative net salvage indications, but limiting it to a negative five percent net salvage estimate for this account at this time.

FERC Account 392.2 Transportation Equipment General (Positive 20 percent)

This account consists of gross salvage and removal cost associated with automobiles, trucks, and other transportation that support general utility operations. The most recent five and ten year moving average show positive 22 and positive 18 percent net salvage, respectively. This study recommends following these net salvage indications. This study recommends 20 percent positive net salvage estimate for this account at this time.

FERC Account 392.3 Transportation Equipment – Transmission (Positive 6 percent)

This account consists of gross salvage and cost of removal associated with autos, trucks and other equipment used to support transmission operations. The most recent five and ten year moving averages both show positive 6 net salvage. This study recommends following these net salvage indications. This study recommends six percent positive net salvage estimate for this account at this time.

FERC Account 396 Power Operated Equipment (Positive 6 percent)

This account consists of gross salvage and removal cost associated with power-operated equipment such as bulldozers, forklifts, pile drivers, and tractors. The most recent five and ten year moving average show positive 5 and 6 percent, respectively. This study recommends following these net salvage indications with a six percent positive net salvage estimate for this account at this time.

GENERAL PLANT AMORTIZED ACCOUNTS

FERC Account 391, 391.6 and 391.7 Office Furniture and Equipment (0 percent net salvage)

This account consists of miscellaneous office furniture such as desks, chairs, filing cabinets, and tables used for general utility service. The most recent five and ten year moving averages both show a 0 percent net salvage. No salvage or cost of removal is expected. This study recommends a zero percent net salvage estimate for this account at this time.

FERC Account 391.2 Network Equipment (0 percent net salvage)

This account consists of gross salvage and removal cost associated with network computer equipment used for general utility service. This study recommends separating the account in the 391.2 account: Network equipment, PC, computer and printers, enterprise software, and non-Enterprise software. History combines these assets into one group. The most recent five and ten year moving average in the combined account shows 0 percent net salvage. While some intermittent salvage and cost of removal have been recorded historically, none is expected to occur in the future. Based on judgment, this study recommends zero percent net salvage for this account at this time.

FERC Account 391.2 PC, Servers, Printers (0 percent net salvage)

This account consists of gross salvage and removal cost associated with personal computers, servers, printers, and other similar computer equipment used for general utility service. This study recommends separating the account in the 391.2 account: Network equipment, PC, computer and printers, enterprise software, and non-Enterprise software. History combined these assets into one group. The most recent five and ten year moving average in the combined account shows 0 percent net salvage. While some intermittent salvage and cost of removal have been recorded historically, none is expected to occur in the future. Based on judgment, this study recommends zero percent net salvage for this account at this time.

FERC Account 391.2 Non-Enterprise Software (0 percent net salvage)

This account consists of gross salvage and removal cost associated with non-Enterprise computer software used for general utility service. This study recommends separating the account in the 391.2 account: Network equipment, PC, computer and printers, enterprise software, and non-Enterprise software. History combined these assets into one group. The most recent five and ten year moving averages in the combined account shows 0 percent net salvage. While some intermittent salvage and cost of removal have been recorded historically, none is expected to occur in the future. Based on judgment, this study recommends zero percent net salvage for this account at this time.

FERC Account 391.2 Enterprise Software (0 percent net salvage)

This account consists of gross salvage and removal cost associated with Oracle and other enterprise software used for general utility service. This study recommends separating the account in the 391.2 account: Network equipment, PC, computer and printers, enterprise software, and non-Enterprise software. History combined these assets into one group. The most recent five and ten year moving averages in the combined account shows 0 percent net salvage. While some intermittent salvage and cost of removal have been recorded historically, none is expected to occur in the future. Based on judgment, this study recommends zero percent net salvage for this account at this time.

FERC Account 393 Stores Equipment (0 percent net salvage)

This account consists of gross salvage and removal cost associated with stores equipment used for general utility service. Retirement history and net salvage history is very limited for this account. While there has been some history of salvage being recorded, it has been intermittent and is not expected to occur in the future. Based on judgment, this study recommends an estimate of zero percent net salvage for this account at this time.

FERC Account 394 Tools, Shop, and Garage Equipment (0 percent net salvage)

This account consists of gross salvage and removal cost for various items or tools used in shop and garages such as air compressors, grinders, mixers, hoists, and cranes. The most recent five and ten year moving averages show positive 19 and positive 12

percent net salvage, respectively. Typically, these assets have no net salvage. Based on judgment, this study recommends an estimate of zero percent net salvage for this account at this time.

FERC Account 395 Laboratory Equipment (0 percent net salvage)

This account consists of gross salvage and cost of removal for laboratory equipment used in general utility service. The most recent ten year moving average shows negative 1 percent net salvage. Expectations for this account are there will be no salvage or cost of removal in the future. This study recommends following this indication with an estimate of zero percent net salvage for this account at this time.

FERC Account 397 Communication Equipment (0 percent net salvage)

This account consists of gross salvage and cost of removal for communication equipment used in general utility service. The most recent five and ten year moving averages show 0 percent and negative 1 percent net salvage. Some salvage and cost of removal have been recorded in the past, but is not expected to occur in the future. This study recommends following these indications with an estimate of zero percent net salvage for this account at this time.

FERC Account 398 Miscellaneous Equipment (0 percent net salvage)

This account consists of gross salvage and removal cost associated with miscellaneous equipment used in general utility service. The most recent five and ten year moving average show negative 4 and negative 3 percent net salvage, respectively. While there has been a mix of positive and negative net salvage historically, none is expected in the future. This study recommends following these indications with an estimate of zero percent net salvage for this account at this time.

APPENDIX A

Computation of Depreciation Accrual Rates

BIG RIVERS ELECTRIC CORPORATION

Computation of Proposed Depreciation Accrual Rates
Using Average Life Group Depreciation
Excludes Retirement of Station II 2019
As of December 31, 2018

Account and Description (a)	Unit Description (b)	Plant Balance (c)	Book Reserve (d)	Net Salvage % (e)	Net Salvage Amount (f)= (e)/100*(c)	Unaccrued Balance (g)=(c)-(d)-(f)	Average Remaining Life (h)	Annual Accrual Amount (i)=(g)/(h)	Proposed Annual Accrual Rate (j)=(i)/(c)
Production									
Structures									
10103111 Structures-Reid	Reid	$ 3,282,549	$ 3,413,401	-5%	$ (164,127)	$ 33,275	6.42	$ 5,184	0.16%
10103112 Structures-Coleman	Coleman	19,771,615	18,552,487	-5%	(988,581)	2,207,709	16.03	137,705	0.70%
10103113 Structures-Green	Green	27,085,365	22,742,648	-5%	(1,354,268)	5,696,985	21.76	261,837	0.97%
10103114 Structures-Wilson	Wilson	74,067,463	48,263,919	-5%	(3,703,373)	29,506,917	25.64	1,150,825	1.55%
10103116 Strucutures-Reid/Station II	Reid/Station II	372,130	79,805	-5%	(18,606)	310,931	6.49	47,927	12.88%
10103117 Structures-Reid/Green/Station II	Reid/Green/Station II	1,146,436	423,036	-5%	(57,322)	780,723	22.16	35,238	3.07%
10103119 Structures-Central Machine Shop	Central Machine Shop	846,217	518,210	-5%	(42,311)	370,318	25.67	14,426	1.70%
Total Structures		126,571,775	93,993,505		(6,328,589)	38,906,859		1,653,142	
Boiler Plant									
10103120 Central Lab Equipment-Coal Analysis	Central Lab	195,544	26,042	-10%	(19,554)	189,056	25.37	7,452	3.81%
10103121 Boiler Plant-Reid	Reid	7,441,404	7,176,606	-10%	(744,140)	1,008,938	6.24	161,708	2.17%
10103122 Boiler Plant-Coleman	Coleman	82,020,790	49,987,273	-10%	(8,202,079)	40,235,596	15.40	2,613,107	3.19%
10103123 Boiler Plant-Green	Green	181,670,393	131,870,139	-10%	(18,167,039)	67,967,293	20.00	3,399,019	1.87%
10103124 Boiler Plant-Wilson	Wilson	411,445,050	273,936,949	-10%	(41,144,505)	178,652,606	23.36	7,646,599	1.86%
10103126 Boiler Plant-Reid/Station II	Reid/Station II	1,262,632	294,226	-10%	(126,263)	1,094,669	6.44	170,061	13.47%
10103127 Boiler Plant-Reid/Green/Station II	Reid/Green/Station II	557,474	167,059	-10%	(55,747)	446,162	21.31	20,936	3.76%
Total Boiler Plant		684,593,286	463,458,294		(68,459,329)	289,594,320		14,018,881	
Boiler Plant-Environmental									
1010312A Central Lab Equipment-Coal-Clean Air	Central Lab	950,037	140,198	-15%	(142,506)	952,345	24.81	38,383	4.04%
1010312B Boiler Plant-Clean Air-Reid	Reid	5,052,302	2,837,435	-15%	(757,845)	2,972,712	6.34	468,933	9.28%
1010312C Boiler Plant-Clean Air-Coleman	Coleman	122,634,732	34,537,100	-15%	(18,395,210)	106,492,842	15.75	6,759,313	5.51%
1010312D Boiler Plant-Clean Air-Green	Green	140,090,201	80,801,336	-15%	(21,013,530)	80,302,395	20.21	3,973,590	2.84%
1010312E Boiler Plant-Clean Air-Wilson	Wilson	268,331,833	171,317,728	-15%	(40,249,775)	137,263,880	23.07	5,949,892	2.22%
1010312G Boiler Plant-Clean Air-Reid/Station II	Reid/Station II	123,296	80,796	-15%	(18,494)	60,994	6.33	9,631	7.81%
1010312J Boiler Plant-Clean Air-Reid/Green/Station II	Reid/Green/Station II	13,942	6,482	-15%	(2,091)	9,551	20.58	464	3.33%
Total Boiler Plant-Environmental		537,196,342	289,721,076		(80,579,451)	328,054,718		17,200,205	
Boiler Plant-Environmental-Short Life									
1010312N Boiler Plant-Short Life-Clean Air-Green	Green	925,627	711,455	-15%	(138,844)	353,016	10.53	33,539	3.62%
1010312P Boiler Plant-Short Life-Clean Air-Wilson	Wilson	6,722,995	8,180,756	-10%	(672,300)	(785,461)	8.95	-	0.00%
Total Boiler Plant-Environmental- Short Life		7,648,622	8,892,211		(811,144)	(432,445)		33,539	
Boiler Plant-Short Life									
1010312U Boiler Plant-Short Life-Reid/Station II	Reid/Station II	31,195	28,370	-15%	(4,679)	7,504	1.76	7,504	24.05%
1010312V Boiler Plant-Short Life-Reid	Reid	23,762	37,167	-15%	(3,564)	(9,840)	3.53	-	0.00%
1010312W Boiler Plant-Short Life-Coleman	Coleman	412,629	585,743	-15%	(61,894)	(111,220)	1.06	-	0.00%
1010312X Boiler Plant-Short Life-Green	Green	1,607,887	1,275,585	-15%	(241,183)	573,485	3.65	157,147	9.77%
1010312Y Boiler Plant-Short Life-Wilson	Wilson	1,692,785	1,209,119	-15%	(253,918)	737,583	3.97	185,588	10.96%
Total Boiler Plant- Short Life		3,768,257	3,135,984		(565,239)	1,197,512		350,239	

BIG RIVERS ELECTRIC CORPORATION

Computation of Proposed Depreciation Accrual Rates
Using Average Life Group Depreciation
Excludes Retirement of Station II 2019
As of December 31, 2018

Account and Description (a)	Unit Description (b)	Plant Balance (c)	Book Reserve (d)	Net Salvage % (e)	Net Salvage Amount (f)= (e)/100*(c)	Unaccrued Balance (g)=(c)-(d)-(f)	Average Remaining Life (h)	Annual Accrual Amount (i)=(g)/(h)	Proposed Annual Accrual Rate (j)=(i)/(c)
Turbine									
10103141 Turbo-generator Units-Reid	Reid	4,066,364	4,337,792	-2%	(81,327)	(190,101)	10.05	-	0.00%
10103142 Turbo-generator Units-Coleman	Coleman	33,795,506	24,327,251	-2%	(675,910)	10,144,165	15.60	650,307	1.92%
10103143 Turbo-generator Units-Green	Green	63,535,298	46,726,368	-2%	(1,270,706)	18,079,636	20.84	867,592	1.37%
10103144 Turbo-generator Units-Wilson	Wilson	129,308,495	86,263,044	-2%	(2,586,170)	45,631,621	24.26	1,880,620	1.45%
10103146 Turbo-generator Units-Reid/Station II	Reid/Station II	1,157,460	131,543	-2%	(23,149)	1,049,067	6.46	162,353	14.03%
10103147 Turbo-generator Units-Reid/Green/Station II	Reid/Green/Station II	12,851	1,930	-2%	(257)	11,178	21.89	511	3.97%
Total Turbine		231,875,975	161,787,928		(4,637,519)	74,725,566		3,561,383	
Electric Equipment									
10103151 Accessory Electric Equipment-Reid	Reid	1,666,200	1,251,118	-5%	(83,310)	498,392	6.34	78,646	4.72%
10103152 Accessory Electric Equipment-Coleman	Coleman	9,496,083	6,905,490	-5%	(474,804)	3,065,397	15.48	198,007	2.09%
10103153 Accessory Electric Equipment-Green	Green	18,376,704	14,277,645	-5%	(918,835)	5,017,894	20.67	242,785	1.32%
10103154 Accessory Electric Equipment-Wilson	Wilson	35,596,262	23,747,648	-5%	(1,779,813)	13,628,427	24.28	561,404	1.58%
10103156 Accessory Electric Equipment-Reid/Station II	Reid/Station II	54,679	2,224	-5%	(2,734)	55,189	6.49	8,500	15.55%
10103157 Accessory Electric Equipment-Reid/Green/Station II	Reid/Green/Station II	57,489	7,835	-5%	(2,874)	52,528	22.24	2,361	4.11%
10103159 Accessory Electric Equipment-Central Machine Shop	Central Machine Shop	43,548	36,409	-5%	(2,177)	9,316	23.62	394	0.91%
Total Electric Equipment		65,290,966	46,228,369		(3,264,548)	22,327,145		1,092,099	
Miscellaneous Equipment									
10103160 Central Lab Equipment-General	Central Lab	179,669	35,738	-5%	(8,983)	152,915	10.19	15,010	8.35%
10103161 Miscellaneous-Reid	Reid	15,854	2,760	-5%	(793)	13,886	6.07	2,289	14.44%
10103162 Miscellaneous-Coleman	Coleman	1,300,638	398,194	-5%	(65,032)	967,475	7.12	135,900	10.45%
10103163 Miscellaneous-Green	Green	1,640,929	428,925	-5%	(82,046)	1,294,050	8.36	154,768	9.43%
10103164 Miscellaneous-Wilson	Wilson	2,190,240	553,685	-5%	(109,512)	1,746,067	8.67	201,440	9.20%
10103166 Miscellaneous-Reid/Station II	Reid/Station II	17,184	965	-5%	(859)	17,078	6.36	2,683	15.62%
10103167 Miscellaneous-Reid/Green/Station II	Reid/Green/Station II	201,476	54,303	-5%	(10,074)	157,247	8.25	19,071	9.47%
10103169 Miscellaneous-Central Machine Shop	Central Machine Shop	698,165	121,536	-5%	(34,908)	611,537	10.54	58,033	8.31%
Total Miscellaneous Equipment		6,244,155	1,596,107		(312,208)	4,960,257		589,195	
Combustion Turbine									
10103410 CT-Structures	CT	167,548	136,016	-5%	(8,377)	39,909	12.36	3,229	1.93%
10103420 CT-Fuel Holders & Access.	CT	1,446,805	1,522,518	-5%	(72,340)	(3,372)	12.31	-	0.00%
10103430 CT-Prime Movers	CT	6,473,717	4,763,761	-5%	(323,686)	2,033,641	11.87	171,366	2.65%
10103440 CT-Generators	CT	1,941,819	346,795	-5%	(97,091)	1,692,116	12.28	137,827	7.10%
10103450 CT-Accessory Electrical Equipment	CT	561,535	260,564	-5%	(28,077)	329,048	3.77	87,261	15.54%
Total Combustion Turbine		10,591,424	7,029,653		(529,571)	4,091,342		399,683	
	TOTAL PRODUCTION PLANT	**1,673,780,801**	**1,075,843,126**		**(165,487,597)**	**763,425,273**		**38,898,366**	
Transmission									
352 Structures		8,470,671	4,975,062	-5%	(423,534)	3,919,143	43.58	89,936	1.06%
353 Station Equipment		152,651,264	83,141,370	0%	-	69,509,894	37.92	1,833,281	1.20%
354 Towers		8,593,544	5,981,437	-5%	(429,677)	3,041,785	28.83	105,508	1.23%
355 Poles		54,492,711	30,339,142	-25%	(13,623,178)	37,776,747	31.70	1,191,659	2.19%
356 Lines		50,435,370	30,371,874	-20%	(10,087,074)	30,150,570	29.17	1,033,517	2.05%
	Total Transmission	**274,643,562**	**154,808,886**		**(24,563,463)**	**144,398,139**		**4,253,901**	

BIG RIVERS ELECTRIC CORPORATION

Computation of Proposed Depreciation Accrual Rates
Using Average Life Group Depreciation
Excludes Retirement of Station II 2019
As of December 31, 2018

Account and Description (a)	Unit Description (b)	Plant Balance (c)	Book Reserve (d)	Net Salvage % (e)	Net Salvage Amount (f)= (e)/100*(c)	Unaccrued Balance (g)=(c)-(d)-(f)	Average Remaining Life (h)	Annual Accrual Amount (i)=(g)/(h)	Proposed Annual Accrual Rate (j)=(i)/(c)
General Plant Depreciated									
390 Structures		5,966,831	3,674,353	-5%	(298,342)	2,590,819	35.11	73,787	1.24%
392.2 Vehicles-General		3,256,155	1,526,355	20%	651,231	1,078,569	9.88	109,177	3.35%
392.3 Vehicles-Transmission		1,931,420	1,375,451	6%	115,885	440,084	13.48	32,647	1.69%
396 Power Operated Equipment		1,404,140	450,871	6%	84,248	869,021	16.08	54,038	3.85%
	Total General Plant Depreciated	**12,558,546**	**7,027,030**		**553,023**	**4,978,493**		**269,648**	
	General Plant Amortized	40,327,174	22,947,727						
	Total General Plant Depreciated & Amortized	52,885,720	29,974,757						
	Total Depreciable and Amortized	**2,001,310,083**	**1,260,626,769**						

10103010 ORGANIZATION	420	0
10103020 FRANCHISES AND CONSENTS	66,476	0
10103101 LAND AND LAND RIGHTS REID	83,342	0
10103102 LAND AND LAND RIGHTS COLEMAN	1,124,665	0
10103103 LAND AND LAND RIGHTS GREEN	1,110,712	0
10103104 LAND AND LAND RIGHTS WILSON	2,218,858	0
10103500 LAND RIGHT OF WAYS-TRANSMISSION	14,838,527	0
10103501 LAND-TRANSMISSION	853,262	0
10103890 LAND AND LAND RIGHTS GENERAL PLANT	407,251	0
Total Big Rivers after Station II retirement	2,022,013,595	1,260,626,769
GL	2,022,013,595	1,260,626,769
Difference	0	0

BIG RIVERS ELECTRIC CORPORATION

Computation of Proposed Depreciation Amortization Rates
Using Average Life Group Depreciation
As of December 31, 2018

Account	Description	Plant Balance 12/31/2018	Book Reserve 12/31/2018	Theoretical Reserve 12/31/2018	Reserve Difference	Remaining Life	Assets to Ret > ASL
391.0/391.6/391.7	Office Furniture & Equipment	820,988.78	690,607.22	507,369.94	183,237.28	6.84	179,039.87
391.2	Network Equipment	1,570,879.99	871,521.51	689,414.75	182,106.76	8.62	36,753.11
391.2	PCs, Servers, Printers	6,621,496.89	3,566,822.18	4,616,685.47	(1,049,863.29)	3.56	2,680,631.07
391.2	Non-Enterprise Software	3,921,215.09	2,278,027.64	3,348,506.09	(1,070,478.45)	1.64	2,173,122.77
391.2	Enterprise Software	14,695,121.01	10,090,395.31	7,863,757.13	2,226,638.18	7.04	232,689.26
393.0	Stores Equipment	111,491.05	109,319.28	87,394.37	21,924.91	9.24	54,105.59
394.0	Tools	1,004,001.08	741,087.86	595,325.86	145,762.00	12.03	324,540.93
395.0	Lab Equipment	484,565.74	265,822.29	198,757.94	67,064.35	21.19	120,478.47
397.0	Communication Equipment	10,554,840.49	4,078,429.89	3,727,038.48	351,391.41	11.58	533,622.20
398.0	Miscellaneous Equipment	542,574.17	255,694.18	228,397.70	27,296.48	9.74	58,640.23
	Subtotal General Amortized	40,327,174.29	22,947,727.36	21,862,647.74	1,085,079.62		6,393,623.50

After Retirements of Assets With Age > Average Service Life

Account	Description	Balance 12/31/2018	Reserve 12/31/2018	Proposed Life	Annual Amortization	Amortization Rate	Annual Reserve Amortization
391.0/391.6/391.7	Office Furniture & Equipment	641,948.91	511,567.35	14	45,853.49	7.14%	(26,790.70)
391.2	Network Equipment	1,534,126.88	834,768.40	15	102,275.13	6.67%	(21,129.58)
391.2	PCs, SERVERs, PRINTERS, ETC	3,940,865.82	886,191.11	7	562,980.83	14.29%	294,817.21
391.2	Non-Enterprise Software	1,748,092.32	104,904.87	5	349,618.46	20.00%	653,489.00
391.2	Enterprise Software	14,462,431.75	9,857,706.05	15	964,162.12	6.67%	(316,436.76)
393.0	Stores Equipment	57,385.46	55,213.69	22	2,608.43	4.55%	(2,373.34)
394.0	Tools	679,460.15	416,546.93	20	33,973.01	5.00%	(12,117.14)
395.0	Lab Equipment	364,087.27	145,343.82	27	13,484.71	3.70%	(3,164.17)
397.0	Communication Equipment	10,021,218.29	3,544,807.69	17	589,483.43	5.88%	(30,337.64)
398.0	Miscellaneous Equipment	483,933.94	197,053.95	15	32,262.26	6.67%	(2,803.03)
	Subtotal General Amortized	33,933,550.79	16,554,103.86		2,696,701.87		533,153.85

APPENDIX B

Comparison of Approved versus Proposed Accrual Rates

BIG RIVERS ELECTRIC CORPORATION

Computation of Current vs Proposed Depreciation Accrual Rates
Excludes Retirement Station II 2019
Using Average Life Group Depreciation
As of December 31, 2018

Account (a)	Description (b)	Plant Balance (c)	Approved Accrual Rate (d)	Annual Accrual at Approved Rates (e) =(d) *(c)	Proposed Accrual Rate (f)	Annual Accrual at Proposed Rates (g) =(c) *(f)	Difference (h) =(g) -(e)
Production							
Structures							
10103111 Structures-Reid	Reid	3,282,548.59	1.38%	45,299.17	0.16%	5,184.31	(40,114.86)
10103112 Structures-Coleman	Coleman	19,771,615.33	1.38%	272,848.29	0.70%	137,704.57	(135,143.72)
10103113 Structures-Green	Green	27,085,364.61	1.38%	373,778.03	0.97%	261,837.04	(111,940.99)
10103114 Structures-Wilson	Wilson	74,067,462.72	1.38%	1,022,130.99	1.55%	1,150,824.88	128,693.89
10103116 Strucutures-Reid/Station II	Reid/Station II	372,129.98	1.38%	5,135.39	12.88%	47,927.06	42,791.67
10103117 Structures-Reid/Green/Station II	Reid/Green/Station II	1,146,436.34	1.38%	15,820.82	3.07%	35,237.93	19,417.11
10103119 Structures-Central Machine Shop	Central Machine Shop	846,217.35	1.38%	11,677.80	1.70%	14,425.77	2,747.97
Total Structures		126,571,774.92		1,746,690.49		1,653,141.56	(93,548.93)
Boiler Plant							
10103120 Central Lab Equipment-Coal Analysis	Central Lab	195,543.83	2.02%	3,949.99	3.81%	7,451.57	3,501.59
10103121 Boiler Plant-Reid	Reid	7,441,403.83	2.02%	150,316.36	2.17%	161,708.15	11,391.80
10103122 Boiler Plant-Coleman	Coleman	82,020,789.83	2.02%	1,656,819.95	3.19%	2,613,106.57	956,286.61
10103123 Boiler Plant-Green	Green	181,670,392.92	2.02%	3,669,741.94	1.87%	3,399,019.49	(270,722.45)
10103124 Boiler Plant-Wilson	Wilson	411,445,049.95	2.02%	8,311,190.01	1.86%	7,646,599.39	(664,590.62)
10103126 Boiler Plant-Reid/Station II	Reid/Station II	1,262,631.53	2.02%	25,505.16	13.47%	170,060.66	144,555.51
10103127 Boiler Plant-Reid/Green/Station II	Reid/Green/Station II	557,473.63	2.02%	11,260.97	3.76%	20,935.64	9,674.67
Total Boiler Plant		684,593,285.52		13,828,784.37		14,018,881.48	190,097.11
Boiler Plant-Environmental							
1010312A Central Lab Equipment-Coal-Clean Air	Central Lab	950,037.38	2.43%	23,085.91	4.04%	38,382.63	15,296.72
1010312B Boiler Plant-Clean Air-Reid	Reid	5,052,301.71	2.43%	122,770.93	9.28%	468,932.98	346,162.05
1010312C Boiler Plant-Clean Air-Coleman	Coleman	122,634,732.06	2.43%	2,980,023.99	5.51%	6,759,313.11	3,779,289.12
1010312D Boiler Plant-Clean Air-Green	Green	140,090,200.52	2.43%	3,404,191.87	2.84%	3,973,590.19	569,398.32
1010312E Boiler Plant-Clean Air-Wilson	Wilson	268,331,832.85	2.43%	6,520,463.54	2.22%	5,949,891.77	(570,571.77)
1010312J Boiler Plant-Clean Air-Reid/Green/Station I	Reid/Green/Station II	13,942.08	2.43%	338.79	3.33%	463.98	125.19
1010312G Boiler Plant-Clean Air-Reid/Station II	Reid/Station II	123,295.54	2.43%	2,996.08	7.81%	9,630.83	6,634.75
Total Boiler Plant-Environmental		537,196,342.14		13,053,871.11		17,200,205.48	4,146,334.37
Boiler Plant-Environmental-Short Life							
1010312N Boiler Plant-Short Life-Clean Air-Green	Green	925,626.94	15.95%	147,637.50	3.62%	33,538.81	(114,098.68)
1010312P Boiler Plant-Short Life-Clean Air-Wilson	Wilson	6,722,995.14	15.95%	1,072,317.72	0.00%	0.00	(1,072,317.72)
Total Boiler Plant-Environmental- Short Life		7,648,622.08		1,219,955.22		33,538.81	(1,186,416.41)

BIG RIVERS ELECTRIC CORPORATION

Computation of Current vs Proposed Depreciation Accrual Rates
Excludes Retirement Station II 2019
Using Average Life Group Depreciation
As of December 31, 2018

Account (a)		Description (b)	Plant Balance (c)	Approved Accrual Rate (d)	Annual Accrual at Approved Rates (e) =(d) *(c)	Proposed Accrual Rate (f)	Annual Accrual at Proposed Rates (g) =(c) *(f)	Difference (h) =(g) -(e)
Boiler Plant-Short Life								
1010312U	Boiler Plant-Short Life-Reid/Station II	Reid/Station II	31,194.63	25.38%	7,917.20	24.05%	7,503.75	(413.44)
1010312V	Boiler Plant-Short Life-Reid	Reid	23,762.00	25.38%	6,030.80	0.00%	0.00	(6,030.80)
1010312W	Boiler Plant-Short Life-Coleman	Coleman	412,629.02	25.38%	104,725.25	0.00%	0.00	(104,725.25)
1010312X	Boiler Plant-Short Life-Green	Green	1,607,886:88	25.38%	408,081.69	9.77%	157,147.18	(250,934.51)
1010312Y	Boiler Plant-Short Life-Wilson	Wilson	1,692,784.70	25.38%	429,628.76	10.96%	185,587.68	(244,041.07)
Total Boiler Plant- Short Life			3,768,257.23		956,383.68		350,238.62	(606,145.07)
Turbine								
10103141	Turbo-generator Units-Reid	Reid	4,066,364.16	1.96%	79,700.74	0.00%	0.00	(79,700.74)
10103142	Turbo-generator Units-Coleman	Coleman	33,795,506.41	1.96%	662,391.93	1.92%	650,306.73	(12,085.20)
10103143	Turbo-generator Units-Green	Green	63,535,297.71	1.96%	1,245,291.84	1.37%	867,592.13	(377,699.70)
10103144	Turbo-generator Units-Wilson	Wilson	129,308,494.91	1.96%	2,534,446.50	1.45%	1,880,620.47	(653,826.03)
10103146	Turbo-generator Units-Reid/Station II	Reid/Station II	1,157,460.26	1.96%	22,686.22	14.03%	162,353.22	139,667.00
10103147	Turbo-generator Units-Reid/Green/Station	Reid/Green/Station II	12,851.23	1.96%	251.88	3.97%	510.68	258.80
Total Turbine			231,875,974.68		4,544,769.10		3,561,383.24	(983,385.87)
Electric Equipment								
10103151	Accessory Electric Equipment-Reid	Reid	1,666,200.09	2.03%	33,823.86	4.72%	78,646.04	44,822.18
10103152	Accessory Electric Equipment-Coleman	Coleman	9,496,083.02	2.03%	192,770.49	2.09%	198,007.38	5,236.89
10103153	Accessory Electric Equipment-Green	Green	18,376,704.11	2.03%	373,047.09	1.32%	242,785.34	(130,261.75)
10103154	Accessory Electric Equipment-Wilson	Wilson	35,596,261.99	2.03%	722,604.12	1.58%	561,404.49	(161,199.63)
10103156	Accessory Electric Equipment-Reid/Station	Reid/Station II	54,679.02	2.03%	1,109.98	15.55%	8,500.04	7,390.06
10103157	Accessory Electric Equipment-Reid/Green/	Reid/Green/Station II	57,489.31	2.03%	1,167.03	4.11%	2,361.36	1,194.33
10103159	Accessory Electric Equipment-Central Mac	Central Machine Shop	43,548.07	2.03%	884.03	0.91%	394.44	(489.59)
Total Electric Equipment			65,290,965.61		1,325,406.60		1,092,099.10	(233,307.50)
Miscellaneous Equipment								
10103160	Central Lab Equipment-General	Central Lab	179,668.99	4.04%	7,258.63	8.35%	15,010.23	7,751.60
10103161	Miscellaneous-Reid	Reid	15853.83	4.04%	640.49	14.44%	2,289.04	1,648.55
10103162	Miscellaneous-Coleman	Coleman	1300638.08	4.04%	52,545.78	10.45%	135,899.61	83,353.83
10103163	Miscellaneous-Green	Green	1,640,929.22	4.04%	66,293.54	9.43%	154,768.35	88,474.81
10103164	Miscellaneous-Wilson	Wilson	2,190,240.30	4.04%	88,485.71	9.20%	201,439.94	112,954.23
10103166	Miscellaneous-Reid/Station II	Reid/Station II	17,183.77	4.04%	694.22	15.62%	2,683.30	1,989.07
10103167	Miscellaneous-Reid/Green/Station II	Reid/Green/Station II	201,476.02	4.04%	8,139.63	9.47%	19,071.25	10,931.61
10103169	Miscellaneous-Central Machine Shop	Central Machine Shop	698,165.11	4.04%	28,205.87	8.31%	58,033.01	29,827.14
Total Miscellaneous Equipment			6,244,155.32		252,263.87		589,194.72	336,930.85

BIG RIVERS ELECTRIC CORPORATION

Computation of Current vs Proposed Depreciation Accrual Rates
Excludes Retirement Station II 2019
Using Average Life Group Depreciation
As of December 31, 2018

Account (a)	Description (b)	Plant Balance (c)	Approved Accrual Rate (d)	Annual Accrual at Approved Rates (e) =(d) *(c)	Proposed Accrual Rate (f)	Annual Accrual at Proposed Rates (g) =(c) *(f)	Difference (h) =(g) -(e)
Combustion Turbine							
10103410 CT-Structures	CT	167,548.30	1.06%	1,776.01	1.93%	3,229.13	1,453.12
10103420 CT-Fuel Holders & Access.	CT	1,446,805.01	9.92%	143,523.06	0.00%	0.00	(143,523.06)
10103430 CT-Prime Movers	CT	6,473,716.51	3.02%	195,506.24	2.65%	171,365.85	(24,140.39)
10103440 CT-Generators	CT	1,941,819.06	0.35%	6,796.37	7.10%	137,827.27	131,030.90
10103450 CT-Accessory Electrical Equipment	CT	561,535.08	2.93%	16,452.98	15.54%	87,261.21	70,808.23
Total Combustion Turbine		10,591,423.96		364,054.65		399,683.46	35,628.81
TOTAL PRODUCTION PLANT		1,673,780,801.46		37,292,179.11		38,898,366.46	1,606,187.35
Transmission							
352 Structures		8,470,671.16	1.94%	164,331.02	1.06%	89,936.32	(74,394.70)
353 Station Equipment		152,651,264.13	2.29%	3,495,713.95	1.20%	1,833,281.24	(1,662,432.70)
354 Towers		8,593,544.34	1.36%	116,872.20	1.23%	105,507.51	(11,364.69)
355 Poles		54,492,711.45	2.03%	1,106,202.04	2.19%	1,191,658.87	85,456.83
356 Lines		50,435,370.45	1.81%	912,880.21	2.05%	1,033,516.84	120,636.63
Total Transmission		274,643,561.53		5,795,999.42	7.73%	4,253,900.78	(1,542,098.63)
General Plant Depreciated							
390 Structures		5966830.91	3.76%	224,352.84	1.24%	73,786.76	(150,566.08)
392.2 Vehicles-General		3256155.19	8.58%	279,378.12	3.35%	109,176.60	(170,201.51)
392.3 Vehicles-Transmission		1931419.99	8.31%	160,501.00	1.69%	32,647.05	(127,853.96)
396 Power Operated Equipment		1404139.98	4.69%	65,854.17	3.85%	54,037.86	(11,816.31)
Total General Plant Depreciated		12,558,546.07		730,086.12		269,648.26	(460,437.86)
General Plant Amortized							
391.0/391.6/ Office Furniture & Equipment		641,948.91	9.11%	58,481.55	7.14%	45,853.49	(12,628.05)
391 Network Equipment		1,534,126.88	9.88%	151,571.74	6.67%	102,275.13	(49,296.61)
391 PCs, SERVERs, PRINTERS, ETC		3,940,865.82	9.88%	389,357.54	14.29%	562,980.83	173,623.29
391 Non-Enterprise Software		1,748,092.32	9.88%	172,711.52	20.00%	349,618.46	176,906.94
391 Enterprise Software		14,462,431.75	9.88%	1,428,888.26	6.67%	964,162.12	(464,726.14)
393 Stores Equipment		57,385.46	5.97%	3,425.91	4.55%	2,608.43	(817.48)
394 Tools		679,460.15	6.08%	41,311.18	5.00%	33,973.01	(7,338.17)
395 Lab Equipment		364,087.27	6.12%	22,282.14	3.70%	13,484.71	(8,797.43)
397 Communication Equipment		10,021,218.29	6.25%	626,326.14	5.88%	589,483.43	(36,842.71)
398 Miscellaneous Equipment		483,933.94	6.05%	29,278.00	6.67%	32,262.26	2,984.26

BIG RIVERS ELECTRIC CORPORATION

Computation of Current vs Proposed Depreciation Accrual Rates
Excludes Retirement Station II 2019
Using Average Life Group Depreciation
As of December 31, 2018

Account (a)	Description (b)	Plant Balance (c)	Approved Accrual Rate (d)	Annual Accrual at Approved Rates (e) =(d) *(c)	Proposed Accrual Rate (f)	Annual Accrual at Proposed Rates (g) =(c) *(f)	Difference (h) =(g) -(e)
Amortization for Reserve True Up						533,153.85	533,153.85
Total General Plant Amortized with Reserve True Up		33,933,550.79		2,923,633.98		3,229,855.73	306,221.75
Total Big Rivers Depreciable		1,994,916,459.85		46,741,898.64		46,651,771.24	(90,127.40)
Excluded Items							
Retired Assets Vintage Group Amortization		6,393,623.50					
10103010	ORGANIZATION	419.82					
10103020	FRANCHISES AND CONSENTS	66475.65					
10103101	LAND AND LAND RIGHTS REID	83342.47					
10103102	LAND AND LAND RIGHTS COLEMAN	1124664.82					
10103103	LAND AND LAND RIGHTS GREEN	1110711.72					
10103104	LAND AND LAND RIGHTS WILSON	2218857.54					
10103500	LAND RIGHT OF WAYS-TRANSMISSION	14838526.93					
10103501	LAND-TRANSMISSION	853261.76					
10103890	LAND AND LAND RIGHTS GENERAL PLANT	407251.23					
Total Big Rivers after Station II Retirement		2,022,013,595.29					
GL		2,022,013,595.29					
Difference		0.00					

APPENDIX C

Comparison of Depreciation Parameters

BIG RIVERS ELECTRIC CORPORATION

Comparison of Current and Proposed
Life and Net Salvage Parameters
As of December 31, 2018

Account	Description	Approved Average Service Life - Years -	Approved Net Salvage Factor - % -	Proposed Average Service Life - Years -	Proposed Iowa Curve	Proposed Net Salvage Factor - % -
PRODUCTION PLANT						
310	Land & Land Improvements	NA	NA	NA	NA	NA
311	Structures	62.0	-4.5%	95	R3	-5.0%
312	Boiler Plant	59.5	-5.0%	65	R2	-10.0%
312 A-K	Boiler Plant - Environment Compliance	53.0	-2.0%	60	R1.5	-15.0%
312 L-P	Short-Life Production Plant -Environmental	10.0	0.0%	14	L0	-15.0%
312 V-Z	Short-Life Production Plant -Other	10.0	0.0%	6	S0	-15.0%
314	Turbine	59.5	-8.2%	75	R2	-2.0%
315	Electric Equipment	50.9	3.0%	70	R3	-5.0%
316	Miscellaneous Equipment	57.5	0.5%	15	R3	-5.0%
340	Land	NA	NA	NA	NA	NA
341	CT - Structures	52.5	0.0%	160	R1.5	-5.0%
342	CT - Fuel Holders & Access.	52.5	-134.8%	120	R1.5	-5.0%
343	CT - Prime Movers	52.5	-38.3%	71	R0.5	-5.0%
344	CT - Generators	52.5	0.0%	75	R2	-5.0%
345	CT - Accessory Electrical Equipment	52.5	0.0%	11	L3	-5.0%
TRANSMISSION						
350	Land	NA	NA	NA	NA	NA
352	Structures	52.5	-2.4%	70	R4	-5.0%
353	Station Equipment	52.5	-0.2%	55	R1.5	0.0%
354	Towers	57.5	0.0%	60	S5	-5.0%
355	Poles	49.5	0.0%	52	R4	-25.0%

BIG RIVERS ELECTRIC CORPORATION

Comparison of Current and Proposed
Life and Net Salvage Parameters
As of December 31, 2018

Account	Description	Approved Average Service Life - Years -	Approved Net Salvage Factor - % -	Proposed Average Service Life - Years -	Proposed Iowa Curve	Proposed Net Salvage Factor - % -
356	Lines	52.5	0.0%	53	R4	-20.0%
GENERAL PLANT						
389	Land	NA	NA	NA	NA	NA
390	Structures [1]	42.5	21.8%	49	R0.5	-5.0%
391.6/391.7	Office Furniture & Equipment	10.0	8.9%	14	SQ	0.0%
391.2	Computer	10.0	1.2%			
391.2	Network Equipment	10.0	1.2%	15	SQ	0.0%
	PCs, SERVERs, PRINTERS, ETC	10.0	1.2%	7	SQ	0.0%
	Non Enterprise Software	10.0	1.2%	5	SQ	0.0%
	Enterprise Software	10.0	1.2%	15	SQ	0.0%
391.3	Engineering Computer					
392.2	Vehicles - General	10.0	14.2%	14	L1	20.0%
392.3	Vehicles - Transmission	10.0	16.9%	22	S3	6.0%
393	Stores Equipment	16.0	4.4%	22	SQ	0.0%
394	Tools	16.0	2.7%	20	SQ	0.0%
395	Lab Equipment	16.0	2.1%	27	SQ	0.0%
396	Power Operated Equipment	16.0	24.9%	22	R1	6.0%
397	Communication Equipment	16.0	-0.1%	17	SQ	0.0%
398	Miscellaneous Equipment	16.0	3.2%	15	SQ	0.0%

Approved lives and net salvage parameters: Approved Kentucky Case No. 2013-00199

APPENDIX D

Retirement Data for all Generating Units

BIG RIVERS ELECTRIC CORPORATION
Estimated Generating Unit Retirement Dates
As of December 31, 2018

Unit	Estimated Remaining Life (2012 Study)	Estimated Retirement Date (2012 Study)	Estimated Remaining Life (as of 12/31/2018)	Estimated Retirement Date (as of 12/31/2018	Fuel Source	MW	In-Service Year	Total Life in Years
Coleman 1	20.8	2034	17.0	2035	Coal	150	1969	66
Coleman 2	20.8	2035	17.0	2035	Coal	138	1970	65
Coleman 3	20.8	2037	17.0	2035	Coal	155	1972	63
Green 1	27.5	2040	23.0	2041	Coal	231	1979	62
Green 2	27.5	2042	23.0	2041	Coal	223	1981	60
HMP&L 1	21.0	2034	1.0	2019	Coal	153	1973	46
HMP&L 2	21.0	2035	1.0	2019	Coal	159	1974	45
Reid	12.3	2026	7.0	2025	Coal	65	1966	59
Reid-GT	21.0	2031	13.0	2031	Oil/Natural Gas	65	1976	55
Wilson	31.7	2045	27.0	2045	Coal	417	1986	59

Estimated Remaining life and Estimated Retirement Date 2012 Study determined from Table II-3:
Date in Service+ Years in Service + Total Life
Kentucky Case No. 2013-00199

APPENDIX E

Net Salvage Analysis by Account

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1972	311- Structures	9,237	-	-	-	0.00%									
1973	311- Structures	-	-	-	-	NA	0.00%								
1974	311- Structures	49,315	-	-	-	0.00%	0.00%	0.00%							
1975	311- Structures	10,019	-	2,556	(2,556)	-25.51%	-4.31%	-4.31%	-3.73%						
1976	311- Structures	51,378	-	-	-	0.00%	-4.16%	-2.31%	-2.31%	-2.13%					
1977	311- Structures	404	-	16	(16)	-4.07%	-0.03%	-4.16%	-2.32%	-2.32%	-2.14%				
1978	311- Structures	9,807	-	1,092	(1,092)	-11.13%	-10.85%	-1.80%	-5.12%	-3.03%	-3.03%	-2.82%			
1979	311- Structures	6,495	-	975	(975)	-15.01%	-12.68%	-12.47%	-3.06%	-5.94%	-3.64%	-3.64%	-3.39%		
1980	311- Structures	4,484	-	1,402	(1,402)	-31.27%	-21.65%	-16.69%	-16.45%	-4.80%	-7.32%	-4.58%	-4.58%	-4.28%	
1981	311- Structures	-	-	-	-	NA	-31.27%	-21.65%	-16.69%	-16.45%	-4.80%	-7.32%	-4.58%	-4.58%	-4.28%
1982	311- Structures	6,724	-	322	(322)	-4.79%	-4.79%	-15.38%	-15.25%	-13.78%	-13.64%	-4.80%	-7.13%	-4.59%	-4.59%
1983	311- Structures	582	-	-	-	0.00%	-4.41%	-4.41%	-14.63%	-14.76%	-13.50%	-13.36%	-4.77%	-7.08%	-4.57%
1984	311- Structures	209,902	-	213	(213)	-0.10%	-0.10%	-0.25%	-0.25%	-0.87%	-1.28%	-1.68%	-1.69%	-1.39%	-2.19%
1985	311- Structures	26,160	-	-	-	0.00%	-0.09%	-0.09%	-0.22%	-0.22%	-0.78%	-1.15%	-1.52%	-1.52%	-1.27%
1986	311- Structures	22,532	-	5,240	(5,240)	-23.26%	-10.76%	-2.11%	-2.10%	-2.17%	-2.17%	-2.65%	-2.94%	-3.22%	-3.23%
1987	311- Structures	15,673	-	-	-	0.00%	-13.72%	-8.14%	-1.98%	-1.98%	-2.05%	-2.05%	-2.51%	-2.79%	-3.06%
1988	311- Structures	10,603	120	503	(383)	-3.61%	-1.46%	-11.52%	-7.50%	-2.05%	-2.04%	-2.11%	-2.11%	-2.55%	-2.82%
1989	311- Structures	15,906	-	357	(357)	-2.24%	-2.79%	-1.75%	-9.24%	-6.58%	-2.06%	-2.05%	-2.11%	-2.11%	-2.53%
1990	311- Structures	5,170	83	2,331	(2,248)	-43.49%	-12.36%	-9.43%	-6.31%	-11.77%	-8.57%	-2.76%	-2.75%	-2.80%	-2.80%
1991	311- Structures	1,284	-	-	-	0.00%	-34.83%	-11.65%	-9.06%	-6.14%	-11.56%	-8.45%	-2.75%	-2.74%	-2.79%
1992	311- Structures	19,338	-	-	-	0.00%	0.00%	-8.72%	-6.25%	-5.71%	-4.40%	-9.09%	-7.05%	-2.58%	-2.58%
1993	311- Structures	141,852	-	8,160	(8,160)	-5.75%	-5.06%	-5.02%	-6.21%	-5.86%	-5.74%	-5.31%	-7.05%	-6.34%	-3.54%
1994	311- Structures	32,440	-	5,414	(5,414)	-16.69%	-7.79%	-7.01%	-6.96%	-7.91%	-7.49%	-7.31%	-6.84%	-8.23%	-7.49%
1995	311- Structures	292	-	-	-	0.00%	-16.54%	-7.78%	-7.00%	-6.95%	-7.90%	-7.48%	-7.30%	-6.83%	-8.22%
1996	311- Structures	1,677	-	455	(455)	-27.10%	-23.09%	-17.06%	-7.96%	-7.17%	-7.13%	-8.06%	-7.63%	-7.45%	-6.97%
1997	311- Structures	1,701	-	537	(537)	-31.56%	-29.35%	-27.02%	-17.74%	-8.18%	-7.38%	-7.33%	-8.25%	-7.82%	-7.62%
1998	311- Structures	4,884	-	-	-	0.00%	-8.15%	-12.00%	-11.59%	-15.63%	-7.97%	-7.20%	-7.16%	-8.06%	-7.65%
1999	311- Structures	130,509	-	-	-	0.00%	0.00%	-0.39%	-0.71%	-0.71%	-3.73%	-4.65%	-4.38%	-4.36%	-4.96%
2000	311- Structures	594,813	-	-	-	0.00%	0.00%	0.00%	-0.07%	-0.14%	-0.14%	-0.84%	-1.60%	-1.57%	-1.57%
2001	311- Structures	32,702	-	-	-	0.00%	0.00%	0.00%	0.00%	-0.07%	-0.13%	-0.13%	-0.80%	-1.55%	-1.52%
2002	311- Structures	260,690	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	-0.05%	-0.10%	-0.10%	-0.60%	-1.21%
2003	311- Structures	100,439	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.05%	-0.09%	-0.09%	-0.55%
2004	311- Structures	87,316	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.04%	-0.08%	-0.08%
2005	311- Structures	30,893	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.04%	-0.08%
2006	311- Structures	7,200	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.04%
2007	311- Structures	19,441	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	311- Structures	184,086	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	311- Structures	39,450	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	311- Structures	15,683	-	3,829	(3,829)	-24.41%	-6.94%	-1.60%	-1.48%	-1.44%	-1.29%	-1.00%	-0.79%	-0.51%	-0.49%
2011	311- Structures	206,474	-	94,234	(94,234)	-45.64%	-44.14%	-37.48%	-22.00%	-21.08%	-20.76%	-19.49%	-16.61%	-14.19%	-10.30%
2012	311- Structures	173,658	-	34,698	(34,698)	-19.98%	-33.92%	-33.54%	-30.50%	-21.44%	-20.78%	-20.55%	-19.61%	-17.37%	-15.35%
2013	311- Structures	48,820	-	2,232	(2,232)	-4.57%	-16.60%	-30.58%	-30.36%	-27.89%	-20.20%	-19.63%	-19.43%	-18.60%	-16.60%
2014	311- Structures	455,353	28,205	33,905	(5,699)	-1.25%	-1.57%	-6.29%	-15.48%	-15.63%	-14.98%	-12.52%	-12.31%	-12.23%	-11.91%
2015	311- Structures	11,357	-	10,100	(10,100)	-88.93%	-3.39%	-3.50%	-7.65%	-16.41%	-16.55%	-15.86%	-13.29%	-13.06%	-12.98%
2016	311- Structures	10,567	-	1,908	(1,908)	-18.05%	-54.77%	-3.71%	-3.79%	-7.81%	-16.43%	-16.56%	-15.88%	-13.33%	-13.11%
2017	311- Structures	137,421	-	7,260	(7,260)	-5.28%	-6.19%	-12.09%	-4.06%	-4.10%	-7.39%	-14.96%	-15.10%	-14.56%	-12.47%
2018	311- Structures	-	-	-	-	NA	-5.28%	-6.19%	-12.09%	-4.06%	-4.10%	-7.39%	-14.96%	-15.10%	-14.56%
1969	312- Boiler Plant	6,000	-	-	-	0.00%									
1970	312- Boiler Plant	5,360	-	-	-	0.00%	0.00%								
1971	312- Boiler Plant	-	-	-	-	NA	0.00%	0.00%							
1972	312- Boiler Plant	35,260	1,406	1,048	358	1.02%	1.02%	0.88%	0.77%						
1973	312- Boiler Plant	47,785	-	-	-	0.00%	0.43%	0.43%	0.41%	0.38%					
1974	312- Boiler Plant	980	-	-	-	0.00%	0.00%	0.43%	0.43%	0.40%	0.38%				
1975	312- Boiler Plant	72,300	-	-	-	0.00%	0.00%	0.00%	0.23%	0.23%	0.22%	0.21%			
1976	312- Boiler Plant	807	-	-	-	0.00%	0.00%	0.00%	0.00%	0.23%	0.23%	0.22%	0.21%		
1977	312- Boiler Plant	193,134	35,647	99,722	(64,076)	-33.18%	-33.04%	-24.07%	-23.98%	-20.34%	-18.19%	-18.19%	-17.92%	-17.62%	
1978	312- Boiler Plant	18,000	100	5,710	(5,610)	-31.16%	-33.01%	-32.88%	-24.52%	-24.43%	-20.93%	-18.83%	-18.83%	-18.56%	-18.26%
1979	312- Boiler Plant	2,559	-	133	(133)	-5.19%	-27.93%	-32.67%	-32.55%	-24.34%	-24.26%	-20.81%	-18.73%	-18.73%	-18.46%
1980	312- Boiler Plant	325,053	54,195	31,536	22,658	6.97%	6.88%	4.89%	-8.75%	-8.74%	-7.71%	-7.70%	-7.14%	-6.73%	-6.73%
1981	312- Boiler Plant	41,201	-	3,726	(3,726)	-9.04%	5.17%	5.10%	3.41%	-8.77%	-8.76%	-7.79%	-7.78%	-7.25%	-6.86%
1982	312- Boiler Plant	234,532	36,101	6,998	29,103	12.41%	9.20%	8.00%	7.94%	6.81%	-2.67%	-2.67%	-2.45%	-2.45%	-2.33%
1983	312- Boiler Plant	110,071	-	5,300	(5,300)	-4.82%	6.91%	5.20%	6.01%	5.97%	5.06%	-2.93%	-2.93%	-2.71%	-2.71%
1984	312- Boiler Plant	713,794	-	197,477	(197,477)	-27.67%	-24.61%	-16.41%	-16.13%	-10.86%	-10.85%	-11.10%	-13.71%	-13.70%	-13.12%
1985	312- Boiler Plant	345,044	300	24,009	(23,709)	-6.87%	-20.89%	-19.38%	-14.06%	-13.92%	-10.08%	-10.08%	-10.29%	-12.52%	-12.51%
1986	312- Boiler Plant	44,591	-	669	(669)	-1.50%	-6.26%	-20.11%	-18.72%	-13.68%	-13.55%	-9.87%	-9.87%	-10.08%	-12.28%
1987	312- Boiler Plant	449,385	51,363	70,143	(18,780)	-4.18%	-3.94%	-5.14%	-15.50%	-14.79%	-11.43%	-11.38%	-8.74%	-8.74%	-8.92%
1988	312- Boiler Plant	163,385	2,258	3,297	(1,040)	-0.64%	-3.23%	-3.12%	-4.41%	-14.08%	-13.52%	-10.57%	-10.54%	-8.20%	-8.19%
1989	312- Boiler Plant	853,365	28,203	56,784	(28,582)	-3.35%	-2.91%	-3.30%	-3.25%	-3.92%	-10.52%	-10.28%	-8.46%	-8.47%	-8.94%
1990	312- Boiler Plant	729,927	3,500	204,454	(200,954)	-27.53%	-14.50%	-13.20%	-11.35%	-11.16%	-10.59%	-14.28%	-13.98%	-12.28%	-12.24%
1991	312- Boiler Plant	430,079	66,446	10,579	55,867	12.99%	-12.51%	-8.63%	-8.03%	-7.37%	-7.27%	-7.22%	-11.14%	-10.96%	-9.61%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1992	312- Boiler Plant	771,819	164,250	10,861	153,389	19.87%	17.41%	0.43%	-0.73%	-0.72%	-1.18%	-1.18%	-1.70%	-5.82%	-5.80%
1993	312- Boiler Plant	2,547,906	1,330,886	115,937	1,214,949	47.68%	41.22%	37.98%	27.31%	22.40%	21.72%	19.76%	19.60%	18.16%	13.52%
1994	312- Boiler Plant	953,892	-	52,935	(52,935)	-5.55%	33.18%	30.78%	29.15%	21.54%	18.16%	17.68%	16.26%	16.15%	15.06%
1995	312- Boiler Plant	455,049	476	1,783	(1,307)	-0.29%	-3.85%	29.33%	27.79%	26.56%	19.85%	16.92%	16.50%	15.24%	15.14%
1996	312- Boiler Plant	118,764	-	10,790	(10,790)	-9.09%	-2.11%	-4.26%	28.21%	26.89%	25.75%	19.28%	16.47%	16.07%	14.85%
1997	312- Boiler Plant	1,098,445	72,225	61,227	10,998	1.00%	0.02%	-0.07%	-2.06%	22.44%	22.10%	21.49%	16.45%	14.33%	14.03%
1998	312- Boiler Plant	6,723,594	2,228,778	-	2,228,778	33.15%	28.63%	28.07%	26.53%	23.26%	28.49%	27.97%	27.47%	24.57%	22.95%
1999	312- Boiler Plant	2,433,789	-	-	-	0.00%	24.34%	21.84%	21.49%	20.57%	18.46%	23.65%	23.46%	23.17%	20.89%
2000	312- Boiler Plant	1,740,646	-	-	-	0.00%	0.00%	20.45%	18.67%	18.40%	17.72%	16.08%	21.09%	21.03%	20.83%
2001	312- Boiler Plant	4,009,239	-	-	-	0.00%	0.00%	0.00%	14.95%	13.99%	13.82%	13.44%	12.40%	16.88%	16.99%
2002	312- Boiler Plant	2,524,814	-	-	-	0.00%	0.00%	0.00%	0.00%	12.79%	12.09%	11.95%	11.66%	10.84%	14.99%
2003	312- Boiler Plant	6,319,165	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	9.38%	9.01%	8.93%	8.76%	8.24%
2004	312- Boiler Plant	1,256,416	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.91%	8.58%	8.50%	8.35%
2005	312- Boiler Plant	1,901,318	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.28%	8.00%	7.92%
2006	312- Boiler Plant	1,919,836	2,900	-	2,900	0.15%	0.08%	0.06%	0.03%	0.02%	0.02%	0.01%	0.01%	7.74%	7.49%
2007	312- Boiler Plant	1,041,773	-	-	-	0.00%	0.10%	0.08%	0.05%	0.02%	0.02%	0.02%	0.01%	0.01%	7.47%
2008	312- Boiler Plant	3,467,092	-	-	-	0.00%	0.00%	0.05%	0.03%	0.03%	0.02%	0.02%	0.01%	0.01%	0.01%
2009	312- Boiler Plant	1,987,827	-	-	-	0.00%	0.00%	0.00%	0.03%	0.03%	0.03%	0.02%	0.01%	0.01%	0.01%
2010	312- Boiler Plant	14,872,092	-	1,136,303	(1,136,303)	-7.64%	-6.74%	-5.59%	-5.32%	-4.87%	-4.50%	-4.29%	-3.46%	-3.21%	-2.88%
2011	312- Boiler Plant	1,997,775	67,000	597,029	(530,029)	-26.53%	-9.88%	-8.84%	-7.46%	-7.13%	-6.58%	-6.12%	-5.85%	-4.79%	-4.46%
2012	312- Boiler Plant	4,146,682	367,111	750,766	(383,655)	-9.25%	-14.87%	-9.75%	-8.91%	-7.74%	-7.45%	-6.96%	-6.53%	-6.28%	-5.26%
2013	312- Boiler Plant	3,243,229	190,923	570,650	(379,727)	-11.71%	-10.33%	-13.78%	-10.02%	-9.26%	-8.18%	-7.90%	-7.43%	-7.02%	-6.77%
2014	312- Boiler Plant	5,722,671	188,379	2,461,795	(2,273,416)	-39.73%	-29.59%	-23.16%	-23.61%	-15.69%	-14.71%	-13.27%	-12.89%	-12.24%	-11.66%
2015	312- Boiler Plant	4,148,736	610,825	728,452	(117,626)	-2.84%	-24.22%	-21.13%	-18.27%	-19.13%	-14.12%	-13.35%	-12.18%	-11.87%	-11.32%
2016	312- Boiler Plant	2,343,092	-	766,243	(766,243)	-32.70%	-13.62%	-25.85%	-22.88%	-20.00%	-20.60%	-15.32%	-14.53%	-13.32%	-13.00%
2017	312- Boiler Plant	2,229,359	7,095	268,981	(261,885)	-11.75%	-22.49%	-13.14%	-23.67%	-21.48%	-19.16%	-19.77%	-15.11%	-14.37%	-13.25%
2018	312- Boiler Plant	721,619	-	171,948	(171,948)	-23.83%	-14.70%	-22.67%	-13.95%	-23.68%	-21.57%	-19.31%	-19.89%	-15.27%	-14.54%
1994	312 A-K- Environmental Compliance	81,250	-	776	(776)	-0.96%									
1995	312 A-K- Environmental Compliance	1,122,550	466,518	72,813	395,705	35.25%	32.81%								
1996	312 A-K- Environmental Compliance	894,795	-	55,108	(55,108)	-6.16%	16.88%	16.19%							
1997	312 A-K- Environmental Compliance	449,630	-	19,842	(19,842)	-4.41%	-5.57%	13.00%	12.56%						
1998	312 A-K- Environmental Compliance	714,153	211,500	-	211,500	29.62%	16.47%	6.63%	16.73%	16.29%					
1999	312 A-K- Environmental Compliance	873,952	-	-	-	0.00%	13.32%	9.41%	4.66%	13.13%	12.85%				
2000	312 A-K- Environmental Compliance	351,164	-	-	-	0.00%	0.00%	10.91%	8.02%	4.16%	12.08%	11.84%			
2001	312 A-K- Environmental Compliance	261,585	-	-	-	0.00%	0.00%	0.00%	9.61%	7.23%	3.85%	11.40%	11.19%		
2002	312 A-K- Environmental Compliance	295,920	-	-	-	0.00%	0.00%	0.00%	0.00%	8.47%	6.50%	3.55%	10.72%	10.53%	
2003	312 A-K- Environmental Compliance	934,849	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	6.16%	4.94%	2.86%	9.02%	8.89%
2004	312 A-K- Environmental Compliance	2,065,429	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.85%	3.22%	2.00%	6.68%
2005	312 A-K- Environmental Compliance	1,461,242	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.04%	2.59%	1.64%
2006	312 A-K- Environmental Compliance	270,526	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.93%	2.50%
2007	312 A-K- Environmental Compliance	1,714,107	67,320	-	67,320	3.93%	3.39%	1.95%	1.22%	1.04%	1.00%	0.96%	0.92%	0.82%	3.12%
2008	312 A-K- Environmental Compliance	1,182,228	-	-	-	0.00%	2.32%	2.13%	1.45%	1.01%	0.88%	0.85%	0.82%	0.79%	0.72%
2009	312 A-K- Environmental Compliance	1,902,711	-	-	-	0.00%	0.00%	1.40%	1.33%	1.03%	0.78%	0.71%	0.69%	0.67%	0.64%
2010	312 A-K- Environmental Compliance	9,988,610	-	5,328,308	(5,328,308)	-53.34%	-44.81%	-40.76%	-35.58%	-34.94%	-31.85%	-28.31%	-26.95%	-26.55%	-26.20%
2011	312 A-K- Environmental Compliance	2,584,868	-	942,748	(942,748)	-36.47%	-49.88%	-43.32%	-40.05%	-35.71%	-35.16%	-32.47%	-29.30%	-28.07%	-27.69%
2012	312 A-K- Environmental Compliance	5,510,082	-	1,069,605	(1,069,605)	-19.41%	-24.86%	-40.59%	-36.73%	-34.68%	-31.79%	-31.41%	-29.55%	-27.26%	-26.34%
2013	312 A-K- Environmental Compliance	10,884,138	1,057,229	1,521,289	(464,060)	-4.26%	-9.35%	-13.05%	-26.94%	-25.28%	-24.35%	-22.91%	-22.73%	-21.80%	-20.60%
2014	312 A-K- Environmental Compliance	3,963,956	-	1,369,976	(1,369,976)	-34.56%	-12.35%	-14.26%	-16.76%	-27.86%	-26.34%	-25.47%	-24.14%	-23.97%	-23.08%
2015	312 A-K- Environmental Compliance	2,141,446	-	279,002	(279,002)	-13.03%	-27.01%	-12.44%	-14.15%	-16.45%	-26.95%	-25.57%	-24.78%	-23.54%	-23.38%
2016	312 A-K- Environmental Compliance	3,552,670	-	552,437	(552,437)	-15.55%	-14.60%	-22.79%	-12.98%	-14.34%	-16.33%	-25.91%	-24.69%	-23.99%	-22.89%
2017	312 A-K- Environmental Compliance	2,352,275	-	182,524	(182,524)	-7.76%	-12.45%	-12.60%	-19.85%	-12.44%	-13.79%	-15.68%	-24.86%	-23.76%	-23.12%
2018	312 A-K- Environmental Compliance	580,191	-	31,940	(31,940)	-5.51%	-7.31%	-11.83%	-12.12%	-19.19%	-12.27%	-13.63%	-15.50%	-24.59%	-23.52%
2012	312 L-P- Short-Life Prod Plant- Environmental	1,734,816	-	154,877	(154,877)	-0.96%									
2013	312 L-P- Short-Life Prod Plant- Environmental	-	-	-	-	35.25%	32.81%								
2014	312 L-P- Short-Life Prod Plant- Environmental	1,038,259	-	201,015	(201,015)	-6.16%	16.88%	16.19%							
2015	312 L-P- Short-Life Prod Plant- Environmental	94,107	-	15,818	(15,818)	-4.41%	-5.57%	13.00%	12.56%						
2016	312 L-P- Short-Life Prod Plant- Environmental	385,517	-	91,254	(91,254)	29.62%	16.47%	6.63%	16.73%	16.29%					
2017	312 L-P- Short-Life Prod Plant- Environmental	267,623	-	33,021	(33,021)	0.00%	13.32%	9.41%	4.66%	13.13%	12.85%				
2018	312 L-P- Short-Life Prod Plant- Environmental	16,091	-	755	(755)	0.00%	0.00%	10.91%	8.02%	4.16%	12.08%	-14.05%			
2011	312 Q-Z- Short-Life Production Plant- Other	299,569	-	11,717	(11,717)	-0.96%									
2012	312 Q-Z- Short-Life Production Plant- Other	103,741	-	9,322	(9,322)	35.25%	32.81%								
2013	312 Q-Z- Short-Life Production Plant- Other	39,703	-	6,585	(6,585)	-6.16%	16.88%	16.19%							
2014	312 Q-Z- Short-Life Production Plant- Other	28,192	-	7,621	(7,621)	-4.41%	-5.57%	13.00%	12.56%						
2015	312 Q-Z- Short-Life Production Plant- Other	42,976	-	18,425	(18,425)	29.62%	16.47%	6.63%	16.73%	16.29%					
2016	312 Q-Z- Short-Life Production Plant- Other	27,263	-	-	-	0.00%	13.32%	9.41%	4.66%	13.13%	12.85%				
2017	312 Q-Z- Short-Life Production Plant- Other	79,055	-	10,078	(10,078)	0.00%	0.00%	10.91%	8.02%	4.16%	12.08%	-10.27%			

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2018	312 Q-Z- Short-Life Production Plant- Other	47,373	-	-	-	0.00%	-7.97%	-6.56%	-14.49%	-16.06%	-16.14%	-14.13%	-9.54%		
1977	314- Turbine	2,004	-	323	(323)	-16.10%									
1978	314- Turbine	1,844	-	86	(86)	-4.64%	-10.61%								
1979	314- Turbine	-	-	-	-	NA	-4.64%	-10.61%							
1980	314- Turbine	-	-	-	-	NA	NA	-4.64%	-10.61%						
1981	314- Turbine	-	-	-	-	NA	NA	NA	-4.64%	-10.61%					
1982	314- Turbine	-	-	-	-	NA	NA	NA	NA	-4.64%	-10.61%				
1983	314- Turbine	-	-	-	-	NA	NA	NA	NA	NA	-4.64%	-10.61%			
1984	314- Turbine	69,117	-	31,579	(31,579)	-45.69%	-45.69%	-45.69%	-45.69%	-45.69%	-45.69%	-44.62%	-43.84%		
1985	314- Turbine	-	-	-	-	NA	-45.69%	-45.69%	-45.69%	-45.69%	-45.69%	-45.69%	-44.62%	-43.84%	
1986	314- Turbine	-	-	-	-	NA	NA	-45.69%	-45.69%	-45.69%	-45.69%	-45.69%	-45.69%	-44.62%	-43.84%
1987	314- Turbine	5,500	-	100	(100)	-1.82%	-1.82%	-1.82%	-42.46%	-42.46%	-42.46%	-42.46%	-42.46%	-42.46%	-41.54%
1988	314- Turbine	-	-	-	-	NA	-1.82%	-1.82%	-1.82%	-42.46%	-42.46%	-42.46%	-42.46%	-42.46%	-42.46%
1989	314- Turbine	293,352	-	3,446	(3,446)	-1.17%	-1.17%	-1.19%	-1.19%	-1.19%	-9.55%	-9.55%	-9.55%	-9.55%	-9.55%
1990	314- Turbine	-	-	-	-	NA	-1.17%	-1.17%	-1.19%	-1.19%	-1.19%	-9.55%	-9.55%	-9.55%	-9.55%
1991	314- Turbine	4,957	-	1,000	(1,000)	-20.16%	-20.16%	-1.49%	-1.49%	-1.50%	-1.50%	-1.50%	-9.69%	-9.69%	-9.69%
1992	314- Turbine	1,124,186	62,000	107,997	(45,997)	-4.09%	-4.16%	-4.16%	-3.55%	-3.55%	-3.54%	-3.54%	-3.54%	-5.49%	-5.49%
1993	314- Turbine	914,753	-	79,107	(79,107)	-8.65%	-6.14%	-6.17%	-6.17%	-5.54%	-5.54%	-5.53%	-5.53%	-5.53%	-6.68%
1994	314- Turbine	8,633	-	-	-	0.00%	-8.57%	-6.11%	-6.14%	-6.14%	-5.52%	-5.52%	-5.51%	-5.51%	-5.51%
1995	314- Turbine	139,494	-	3,834	(3,834)	-2.75%	-2.59%	-7.80%	-5.90%	-5.93%	-5.93%	-5.37%	-5.37%	-5.36%	-5.36%
1996	314- Turbine	-	-	-	-	NA	-2.75%	-2.59%	-7.80%	-5.90%	-5.93%	-5.93%	-5.37%	-5.37%	-5.36%
1997	314- Turbine	82,124	-	2,269	(2,269)	-2.76%	-2.76%	-2.75%	-2.65%	-7.44%	-5.78%	-5.81%	-5.81%	-5.28%	-5.28%
1998	314- Turbine	100,106	30,453	-	30,453	30.42%	15.47%	15.47%	7.57%	7.37%	-4.40%	-4.25%	-4.29%	-4.29%	-3.94%
1999	314- Turbine	35	-	-	-	0.00%	30.41%	15.46%	15.46%	7.57%	7.37%	-4.40%	-4.25%	-4.29%	-4.29%
2000	314- Turbine	626,847	-	-	-	0.00%	0.00%	4.19%	3.48%	3.48%	2.57%	2.54%	-2.93%	-3.36%	-3.39%
2001	314- Turbine	650,720	-	-	-	0.00%	0.00%	0.00%	2.21%	1.93%	1.93%	1.52%	1.51%	-2.17%	-2.76%
2002	314- Turbine	2,332,032	-	-	-	0.00%	0.00%	0.00%	0.00%	0.82%	0.74%	0.74%	0.62%	0.62%	-1.13%
2003	314- Turbine	1,128,858	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.63%	0.57%	0.57%	0.48%	0.48%
2004	314- Turbine	566,547	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.56%	0.51%	0.51%	0.43%
2005	314- Turbine	715,673	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.45%	0.45%
2006	314- Turbine	202,380	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.48%	0.44%
2007	314- Turbine	823,013	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.43%
2008	314- Turbine	1,296,832	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	314- Turbine	1,115,416	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	314- Turbine	1,827,596	-	147,931	(147,931)	-8.09%	-5.03%	-3.49%	-2.92%	-2.81%	-2.47%	-2.26%	-1.93%	-1.48%	-1.39%
2011	314- Turbine	1,758,893	-	105,769	(105,769)	-6.01%	-7.07%	-5.40%	-4.23%	-3.72%	-3.61%	-3.28%	-3.05%	-2.69%	-2.16%
2012	314- Turbine	1,262,666	-	123,825	(123,825)	-9.81%	-7.60%	-7.79%	-6.33%	-5.20%	-4.67%	-4.56%	-4.19%	-3.95%	-3.53%
2013	314- Turbine	683,526	139,609	65,671	73,938	10.82%	-2.56%	-4.20%	-5.49%	-4.57%	-3.82%	-3.46%	-3.38%	-3.13%	-2.96%
2014	314- Turbine	774,658	202,428	158,623	43,805	5.65%	8.07%	-0.22%	-2.50%	-4.12%	-3.50%	-2.98%	-2.72%	-2.67%	-2.48%
2015	314- Turbine	441,323	-	60,726	(60,726)	-13.76%	-1.39%	3.00%	-2.11%	-3.51%	-4.75%	-4.08%	-3.50%	-3.21%	-3.15%
2016	314- Turbine	1,196,897	70,604	52,331	18,272	1.53%	-2.59%	0.06%	2.43%	-1.11%	-2.52%	-3.80%	-3.34%	-2.92%	-2.70%
2017	314- Turbine	914,843	123,469	45,034	78,435	8.57%	4.58%	1.41%	2.40%	3.83%	0.57%	-1.08%	-2.53%	-2.24%	-1.99%
2018	314- Turbine	105,954	-	6,546	(6,546)	-6.18%	7.04%	4.07%	1.11%	2.13%	3.57%	0.43%	-1.15%	-2.57%	-2.28%
1975	315- Electric Equipment	1,104	-	-	-	0.00%									
1976	315- Electric Equipment	-	-	-	-	NA	0.00%								
1977	315- Electric Equipment	-	-	-	-	NA	NA	0.00%							
1978	315- Electric Equipment	-	-	-	-	NA	NA	NA	0.00%						
1979	315- Electric Equipment	-	-	-	-	NA	NA	NA	NA	0.00%					
1980	315- Electric Equipment	-	-	-	-	NA	NA	NA	NA	NA	0.00%				
1981	315- Electric Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%			
1982	315- Electric Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%		
1983	315- Electric Equipment	119,116	60,000	-	60,000	50.37%	50.37%	50.37%	50.37%	50.37%	50.37%	50.37%	50.37%	49.91%	
1984	315- Electric Equipment	393,929	21,872	4,685	17,188	4.36%	15.05%	15.05%	15.05%	15.05%	15.05%	15.05%	15.05%	15.05%	15.01%
1985	315- Electric Equipment	-	-	-	-	NA	4.36%	15.05%	15.05%	15.05%	15.05%	15.05%	15.05%	15.05%	15.05%
1986	315- Electric Equipment	1,604	-	-	-	0.00%	0.00%	4.35%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
1987	315- Electric Equipment	11,228	-	269	(269)	-2.39%	-2.09%	-2.09%	4.16%	14.63%	14.63%	14.63%	14.63%	14.63%	14.63%
1988	315- Electric Equipment	24,761	-	160	(160)	-0.65%	-1.19%	-1.14%	-1.14%	3.88%	13.94%	13.94%	13.94%	13.94%	13.94%
1989	315- Electric Equipment	2,515	-	953	(953)	-37.90%	-4.08%	-3.59%	-3.45%	-3.45%	3.64%	13.70%	13.70%	13.70%	13.70%
1990	315- Electric Equipment	-	-	-	-	NA	-37.90%	-4.08%	-3.59%	-3.45%	-3.45%	3.64%	13.70%	13.70%	13.70%
1991	315- Electric Equipment	-	-	-	-	NA	NA	-37.90%	-4.08%	-3.59%	-3.45%	-3.45%	3.64%	13.70%	13.70%
1992	315- Electric Equipment	8,694	-	2,444	(2,444)	-28.11%	-28.11%	-28.11%	-30.31%	-9.89%	-8.11%	-7.84%	-7.84%	3.02%	13.06%
1993	315- Electric Equipment	758	-	-	-	0.00%	-25.85%	-25.85%	-25.85%	-28.39%	-9.68%	-7.98%	-7.72%	-7.72%	3.01%
1994	315- Electric Equipment	17,049	-	1,622	(1,622)	-9.51%	-9.11%	-15.34%	-15.34%	-15.34%	-17.30%	-9.63%	-8.38%	-8.18%	-8.18%
1995	315- Electric Equipment	-	-	-	-	NA	-9.51%	-9.11%	-15.34%	-15.34%	-15.34%	-17.30%	-9.63%	-8.38%	-8.18%
1996	315- Electric Equipment	15,661	-	872	(872)	-5.57%	-5.57%	-7.62%	-7.45%	-11.71%	-11.71%	-11.71%	-13.18%	-8.71%	-7.83%
1997	315- Electric Equipment	-	-	-	-	NA	-5.57%	-5.57%	-7.62%	-7.45%	-11.71%	-11.71%	-11.71%	-13.18%	-8.71%
1998	315- Electric Equipment	-	-	-	-	NA	NA	-5.57%	-5.57%	-7.62%	-7.45%	-11.71%	-11.71%	-11.71%	-13.18%
1999	315- Electric Equipment	-	-	-	-	NA	NA	NA	-5.57%	-5.57%	-7.62%	-7.45%	-11.71%	-11.71%	-11.71%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2000	315- Electric Equipment	13,170	-	-	-	0.00%	0.00%	0.00%	0.00%	-3.02%	-3.02%	-5.44%	-5.35%	-8.92%	-8.92%
2001	315- Electric Equipment	77,933	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	-0.82%	-0.82%	-2.01%	-2.00%	-3.70%
2002	315- Electric Equipment	17,065	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.70%	-0.70%	-1.77%	-1.76%
2003	315- Electric Equipment	37,206	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.54%	-0.54%	-1.40%
2004	315- Electric Equipment	81,116	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.36%	-0.36%
2005	315- Electric Equipment	142,019	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.23%
2006	315- Electric Equipment	259,551	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	315- Electric Equipment	166,701	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	315- Electric Equipment	265,189	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	315- Electric Equipment	38,948	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	315- Electric Equipment	148,255	-	55,000	(55,000)	-37.10%	-29.38%	-12.16%	-8.88%	-6.26%	-5.39%	-4.99%	-4.83%	-4.76%	-4.46%
2011	315- Electric Equipment	145,755	-	19,013	(19,013)	-13.04%	-25.17%	-22.23%	-12.37%	-9.68%	-7.23%	-6.35%	-5.93%	-5.76%	-5.69%
2012	315- Electric Equipment	282,487	-	17,203	(17,203)	-6.09%	-8.46%	-15.82%	-14.82%	-10.36%	-8.71%	-6.98%	-6.30%	-5.96%	-5.82%
2013	315- Electric Equipment	54,748	-	-	-	0.00%	-5.10%	-7.50%	-14.45%	-13.61%	-9.75%	-8.28%	-6.70%	-6.07%	-5.76%
2014	315- Electric Equipment	34,567	-	-	-	0.00%	0.00%	-4.63%	-7.00%	-13.70%	-12.94%	-9.40%	-8.03%	-6.53%	-5.93%
2015	315- Electric Equipment	78,285	-	-	-	0.00%	0.00%	0.00%	-3.82%	-6.08%	-12.26%	-11.65%	-8.70%	-7.51%	-6.19%
2016	315- Electric Equipment	67,370	-	-	-	0.00%	0.00%	0.00%	0.00%	-3.32%	-5.46%	-11.24%	-10.73%	-8.18%	-7.11%
2017	315- Electric Equipment	111,994	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	-2.73%	-4.67%	-9.88%	-9.48%	-7.43%
2018	315- Electric Equipment	62,738	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-2.49%	-4.32%	-9.25%	-8.90%
1975	316- Misc. Equipment	124	-	-	-	0.00%									
1976	316- Misc. Equipment	-	-	-	-	NA	0.00%								
1977	316- Misc. Equipment	-	-	-	-	NA	NA	0.00%							
1978	316- Misc. Equipment	1,112	-	-	-	0.00%	0.00%	0.00%	0.00%						
1979	316- Misc. Equipment	20,679	1,300	59	1,241	6.00%	5.69%	5.69%	5.69%	5.66%					
1980	316- Misc. Equipment	16,761	1,436	-	1,436	8.56%	7.15%	6.94%	6.94%	6.94%	6.92%				
1981	316- Misc. Equipment	51,746	29,387	-	29,387	56.79%	44.99%	35.95%	35.51%	35.51%	35.51%	35.46%			
1982	316- Misc. Equipment	18,445	2,674	-	2,674	14.49%	45.68%	38.52%	32.27%	31.94%	31.94%	31.94%	31.91%		
1983	316- Misc. Equipment	18,310	60	-	60	0.33%	7.44%	36.29%	31.88%	27.63%	27.39%	27.39%	27.39%	27.36%	
1984	316- Misc. Equipment	26,377	1,498	-	1,498	5.68%	3.49%	6.70%	29.26%	26.63%	23.83%	23.66%	23.66%	23.66%	23.64%
1985	316- Misc. Equipment	7,983	198	-	198	2.48%	4.94%	3.33%	6.23%	27.52%	25.25%	22.77%	22.61%	22.61%	22.61%
1986	316- Misc. Equipment	64,031	749	-	749	1.17%	1.32%	2.49%	2.15%	3.83%	18.50%	17.68%	16.60%	16.52%	16.52%
1987	316- Misc. Equipment	57,750	296	44	252	0.44%	0.82%	0.92%	1.73%	1.58%	2.82%	14.23%	13.87%	13.29%	13.24%
1988	316- Misc. Equipment	71,125	452	-	452	0.64%	0.55%	0.75%	0.82%	1.39%	1.31%	2.23%	11.17%	11.04%	10.74%
1989	316- Misc. Equipment	69,253	6,900	-	6,900	9.96%	5.24%	3.84%	3.19%	3.17%	3.39%	3.21%	3.84%	10.95%	10.85%
1990	316- Misc. Equipment	9,590	-	-	-	0.00%	8.75%	4.90%	3.66%	3.07%	3.06%	3.28%	3.12%	3.73%	10.69%
1991	316- Misc. Equipment	80,545	23,153	838	22,316	27.71%	24.76%	18.33%	12.87%	10.38%	8.71%	8.57%	8.37%	8.01%	8.29%
1992	316- Misc. Equipment	81,279	3,011	-	3,011	3.70%	15.65%	14.78%	13.39%	10.48%	8.91%	7.77%	7.67%	7.56%	7.29%
1993	316- Misc. Equipment	160,956	7,154	-	7,154	4.44%	4.20%	10.06%	9.77%	9.81%	8.43%	7.56%	6.87%	6.81%	6.76%
1994	316- Misc. Equipment	473,344	623	-	623	0.13%	1.23%	1.51%	4.16%	4.11%	4.57%	4.28%	4.06%	3.88%	3.87%
1995	316- Misc. Equipment	11,860	-	1,137	(1,137)	-9.58%	-0.11%	1.03%	1.33%	3.96%	3.91%	4.38%	4.10%	3.90%	3.73%
1996	316- Misc. Equipment	10,815	-	-	-	0.00%	-5.01%	-0.10%	1.01%	1.31%	3.90%	3.86%	4.33%	4.06%	3.85%
1997	316- Misc. Equipment	8,359	94	-	94	1.13%	0.49%	-3.36%	-0.08%	1.01%	1.31%	3.88%	3.83%	4.30%	4.03%
1998	316- Misc. Equipment	9,863,366	2,943,315	-	2,943,315	29.84%	29.82%	29.78%	29.74%	28.39%	28.02%	27.83%	27.83%	27.81%	27.69%
1999	316- Misc. Equipment	-	-	-	-	NA	29.84%	29.82%	29.78%	29.74%	28.39%	28.02%	27.83%	27.83%	27.81%
2000	316- Misc. Equipment	-	-	-	-	NA	NA	29.84%	29.82%	29.78%	29.74%	28.39%	28.02%	27.83%	27.83%
2001	316- Misc. Equipment	-	-	-	-	NA	NA	NA	29.84%	29.82%	29.78%	29.74%	28.39%	28.02%	27.83%
2002	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	29.84%	29.82%	29.78%	29.74%	28.39%	28.02%
2003	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	29.84%	29.82%	29.78%	29.74%	28.39%
2004	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	29.84%	29.82%	29.78%	29.74%
2005	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	29.84%	29.82%	29.78%
2006	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	29.84%	29.82%
2007	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	29.84%
2008	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	316- Misc. Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	316- Misc. Equipment	143,213	-	53,000	(53,000)	-37.01%	-37.01%	-37.01%	-37.01%	-37.01%	-37.01%	-37.01%	-37.01%	-37.01%	-37.01%
2012	316- Misc. Equipment	26,487	-	-	-	0.00%	-31.23%	-31.23%	-31.23%	-31.23%	-31.23%	-31.23%	-31.23%	-31.23%	-31.23%
2013	316- Misc. Equipment	1,688	-	-	-	0.00%	0.00%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%
2014	316- Misc. Equipment	803	-	-	-	0.00%	0.00%	0.00%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%
2015	316- Misc. Equipment	96,601	-	-	-	0.00%	0.00%	0.00%	0.00%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%
2016	316- Misc. Equipment	7,254	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	-30.92%	-30.92%	-30.92%	-30.92%	-30.92%
2017	316- Misc. Equipment	51,882	15,948	852	15,096	29.10%	25.53%	9.69%	9.64%	894.28%	53.58%	-22.12%	-22.12%	-22.12%	-22.12%
2018	316- Misc. Equipment	47,305	-	18	(18)	-0.04%	15.20%	14.17%	7.43%	7.40%	893.21%	53.52%	-22.13%	-22.13%	-22.13%
1983	341- CT- Structures	210	-	-	-	0.00%									
1984	341- CT- Structures	-	-	-	-	NA	0.00%								
1985	341- CT- Structures	-	-	-	-	NA	NA	0.00%							
1986	341- CT- Structures	525	-	-	-	0.00%	0.00%	0.00%	0.00%						
1987	341- CT- Structures	272	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%					

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1988	341- CT- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
1989	341- CT- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%			
1990	341- CT- Structures	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%		
1991	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	
1992	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
1993	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
1994	341- CT- Structures	1,080	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1995	341- CT- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1996	341- CT- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	341- CT- Structures	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1998	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1999	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2000	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2001	341- CT- Structures	1,378	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2002	341- CT- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2003	341- CT- Structures	18	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2004	341- CT- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	341- CT- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2006	341- CT- Structures	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2009	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2010	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2011	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2012	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2013	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2014	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2017	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2018	341- CT- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1993	342- CT- Fuel Holders & Access.	1,626	-	2,192	(2,192)	-134.78%									
1994	342- CT- Fuel Holders & Access.	-	-	-	-	NA	-134.78%								
1995	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	-134.78%							
1996	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	-134.78%						
1997	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	-134.78%					
1998	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	-134.78%				
1999	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	-134.78%			
2000	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	-134.78%		
2001	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	-134.78%	
2002	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	-134.78%
2003	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2006	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	342- CT- Fuel Holders & Access.	43,725	-	20,000	(20,000)	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%
2012	342- CT- Fuel Holders & Access.	-	-	-	-	NA	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%
2013	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%	-45.74%
2014	342- CT- Fuel Holders & Access.	13,306	-	1,565	(1,565)	-11.77%	-11.77%	-11.77%	-37.81%	-37.81%	-37.81%	-37.81%	-37.81%	-37.81%	-37.81%
2015	342- CT- Fuel Holders & Access.	-	-	-	-	NA	-11.77%	-11.77%	-11.77%	-37.81%	-37.81%	-37.81%	-37.81%	-37.81%	-37.81%
2016	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	-11.77%	-11.77%	-11.77%	-37.81%	-37.81%	-37.81%	-37.81%	-37.81%
2017	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	-11.77%	-11.77%	-11.77%	-37.81%	-37.81%	-37.81%	-37.81%
2018	342- CT- Fuel Holders & Access.	-	-	-	-	NA	NA	NA	NA	-11.77%	-11.77%	-11.77%	-37.81%	-37.81%	-37.81%
1996	343- CT- Prime Movers	118,571	-	45,438	(45,438)	-38.32%									
1997	343- CT- Prime Movers	-	-	-	-	NA	-38.32%								
1998	343- CT- Prime Movers	-	-	-	-	NA	NA	-38.32%							
1999	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	-38.32%						
2000	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	-38.32%					
2001	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	-38.32%				
2002	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	-38.32%			
2003	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	-38.32%		
2004	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	-38.32%	
2005	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	-38.32%
2006	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2007	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	343- CT- Prime Movers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	343- CT- Prime Movers	40,119	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	343- CT- Prime Movers	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2014	343- CT- Prime Movers	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2015	343- CT- Prime Movers	429,367	84,000	70,011	13,989	3.26%	3.26%	3.26%	2.98%	2.98%	2.98%	2.98%	2.98%	2.98%	2.98%
2016	343- CT- Prime Movers	20,079	-	4,196	(4,196)	-20.90%	2.18%	2.18%	2.18%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2017	343- CT- Prime Movers	-	-	-	-	NA	-20.90%	2.18%	2.18%	2.18%	2.00%	2.00%	2.00%	2.00%	2.00%
2018	343- CT- Prime Movers	-	-	-	-	NA	NA	-20.90%	2.18%	2.18%	2.18%	2.00%	2.00%	2.00%	2.00%
2012	344- CT- Generators	4,581	-	-	-	-38.32%									
2013	344- CT- Generators	-	-	-	-	NA	-38.32%								
2014	344- CT- Generators	-	-	-	-	NA	NA	-38.32%							
2015	344- CT- Generators	-	-	-	-	NA	NA	NA	-38.32%						
2016	344- CT- Generators	748,873	40,123	-	40,123	NA	NA	NA	NA	-38.32%					
2017	344- CT- Generators	-	-	-	-	NA	NA	NA	NA	NA	-38.32%				
2018	344- CT- Generators	28,602	-	-	-	NA	NA	NA	NA	NA	NA	5.13%			
1994	345- CT- Accessory Electrical Equip.	542	-	-	-	0.00%									
1995	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	0.00%								
1996	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	0.00%							
1997	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	0.00%						
1998	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	NA	0.00%					
1999	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	NA	NA	0.00%				
2000	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%			
2001	345- CT- Accessory Electrical Equip.	1,274	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
2002	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
2003	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2004	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	345- CT- Accessory Electrical Equip.	6,020	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2006	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2007	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2008	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2009	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2010	345- CT- Accessory Electrical Equip.	16,838	-	4,700	(4,700)	-27.91%	-27.91%	-27.91%	-27.91%	-27.91%	-20.56%	-20.56%	-20.56%	-20.56%	-19.48%
2011	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	-27.91%	-27.91%	-27.91%	-27.91%	-27.91%	-20.56%	-20.56%	-20.56%	-20.56%
2012	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	-27.91%	-27.91%	-27.91%	-27.91%	-27.91%	-20.56%	-20.56%	-20.56%
2013	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	-27.91%	-27.91%	-27.91%	-27.91%	-27.91%	-20.56%	-20.56%
2014	345- CT- Accessory Electrical Equip.	86,667	3,455	814	2,641	3.05%	3.05%	3.05%	3.05%	-1.99%	-1.99%	-1.99%	-1.99%	-1.99%	-1.88%
2015	345- CT- Accessory Electrical Equip.	813	-	-	-	0.00%	3.02%	3.02%	3.02%	3.02%	-1.97%	-1.97%	-1.97%	-1.97%	-1.97%
2016	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	0.00%	3.02%	3.02%	3.02%	3.02%	-1.97%	-1.97%	-1.97%	-1.97%
2017	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	0.00%	3.02%	3.02%	3.02%	3.02%	-1.97%	-1.97%	-1.97%
2018	345- CT- Accessory Electrical Equip.	-	-	-	-	NA	NA	NA	0.00%	3.02%	3.02%	3.02%	3.02%	-1.97%	-1.97%
1994	346- CT- Miscellaneous Equip	460	-	-	-	0.00%									
1995	346- CT- Miscellaneous Equip	-	-	-	-	NA	0.00%								
1996	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	0.00%							
1997	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	0.00%						
1998	346- CT- Miscellaneous Equip	45,634	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%					
1999	346- CT- Miscellaneous Equip	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%				
2000	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%			
2001	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%		
2002	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	
2003	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2004	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2006	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2007	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2008	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2009	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2016	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2017	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2018	346- CT- Miscellaneous Equip	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1984	350- Land	1	-	-	-	0.00%									
1985	350- Land	-	-	-	-	NA	0.00%								
1986	350- Land	-	-	-	-	NA	NA	0.00%							
1987	350- Land	-	-	-	-	NA	NA	NA	0.00%						
1988	350- Land	-	-	-	-	NA	NA	NA	NA	0.00%					
1989	350- Land	-	-	-	-	NA	NA	NA	NA	NA	0.00%				
1990	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%			
1991	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%		
1992	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	
1993	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
1994	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1995	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1996	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1997	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1998	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1999	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2000	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2001	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2002	350- Land	4,302	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2003	350- Land	68	314	-	314	465.28%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%
2004	350- Land	-	-	-	-	NA	465.28%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%
2005	350- Land	-	-	-	-	NA	NA	465.28%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%
2006	350- Land	-	-	-	-	NA	NA	NA	465.28%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%
2007	350- Land	-	-	-	-	NA	NA	NA	NA	465.28%	7.19%	7.19%	7.19%	7.19%	7.19%
2008	350- Land	-	-	-	-	NA	NA	NA	NA	NA	465.28%	7.19%	7.19%	7.19%	7.19%
2009	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	465.28%	7.19%	7.19%	7.19%
2010	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	465.28%	7.19%	7.19%
2011	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	465.28%	7.19%
2012	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	465.28%
2013	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2017	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2018	350- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1971	352- Structures	651	-	-	-	0.00%									
1972	352- Structures	-	-	-	-	NA	0.00%								
1973	352- Structures	294	-	-	-	0.00%	0.00%	0.00%							
1974	352- Structures	3,692	-	-	-	0.00%	0.00%	0.00%	0.00%						
1975	352- Structures	1,395	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%					
1976	352- Structures	491	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
1977	352- Structures	667	-	59	(59)	-8.83%	-5.09%	-2.31%	-0.94%	-0.90%	-0.90%	-0.82%			
1978	352- Structures	329	-	31	(31)	-9.49%	-9.05%	-6.06%	-3.13%	-1.37%	-1.31%	-1.31%	-1.20%		
1979	352- Structures	1,485	-	136	(136)	-9.19%	-9.24%	-9.13%	-7.63%	-5.19%	-2.81%	-2.71%	-2.71%	-2.52%	
1980	352- Structures	443	-	16	(16)	-3.63%	-7.91%	-8.14%	-8.30%	-7.11%	-5.05%	-2.85%	-2.76%	-2.76%	-2.57%
1981	352- Structures	870	-	53	(53)	-6.11%	-5.28%	-7.35%	-7.58%	-7.80%	-6.91%	-5.21%	-3.16%	-3.06%	-3.06%
1982	352- Structures	-	-	-	-	NA	-6.11%	-5.28%	-7.35%	-7.58%	-7.80%	-6.91%	-5.21%	-3.16%	-3.06%
1983	352- Structures	462	-	-	-	0.00%	0.00%	-3.99%	-3.90%	-6.31%	-6.60%	-6.95%	-6.23%	-4.82%	-3.01%
1984	352- Structures	35,682	-	1	(1)	0.00%	0.00%	0.00%	-0.15%	-0.19%	-0.53%	-0.61%	-0.74%	-0.73%	-0.71%
1985	352- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	-0.15%	-0.19%	-0.53%	-0.61%	-0.74%	-0.73%
1986	352- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	-0.15%	-0.19%	-0.53%	-0.61%	-0.74%
1987	352- Structures	1,876	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.14%	-0.18%	-0.51%	-0.58%
1988	352- Structures	468	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.14%	-0.18%	-0.50%
1989	352- Structures	746	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.14%	-0.17%
1990	352- Structures	37,975	172	1,260	(1,089)	-2.87%	-2.81%	-2.78%	-2.65%	-2.65%	-2.65%	-1.42%	-1.41%	-1.41%	-1.46%
1991	352- Structures	-	-	-	-	NA	-2.87%	-2.81%	-2.78%	-2.65%	-2.65%	-2.65%	-1.42%	-1.41%	-1.41%
1992	352- Structures	6,671	-	221	(221)	-3.32%	-3.32%	-2.93%	-2.89%	-2.86%	-2.74%	-2.74%	-2.74%	-1.57%	-1.56%
1993	352- Structures	3,465	-	-	-	0.00%	-2.18%	-2.18%	-2.72%	-2.68%	-2.66%	-2.56%	-2.56%	-2.56%	-1.51%
1994	352- Structures	987	-	-	-	0.00%	0.00%	-1.99%	-1.99%	-2.67%	-2.63%	-2.60%	-2.51%	-2.51%	-2.51%
1995	352- Structures	14,474	-	218	(218)	-1.51%	-1.41%	-1.15%	-1.72%	-1.72%	-2.40%	-2.38%	-2.36%	-2.29%	-2.29%
1996	352- Structures	4,625	40	1,162	(1,122)	-24.26%	-7.02%	-6.67%	-5.69%	-5.17%	-5.17%	-3.89%	-3.84%	-3.82%	-3.72%
1997	352- Structures	-	-	-	-	NA	-24.26%	-7.02%	-6.67%	-5.69%	-5.17%	-5.17%	-3.89%	-3.84%	-3.82%
1998	352- Structures	10,364	-	-	-	0.00%	0.00%	-7.49%	-4.55%	-4.40%	-3.95%	-3.85%	-3.85%	-3.37%	-3.34%
1999	352- Structures	5,379	-	-	-	0.00%	0.00%	0.00%	-5.51%	-3.85%	-3.74%	-3.41%	-3.40%	-3.40%	-3.16%
2000	352- Structures	107	40	-	40	37.21%	0.72%	0.25%	0.25%	-5.29%	-3.72%	-3.62%	-3.30%	-3.30%	-3.30%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2001	352- Structures	10,118	-	-	-	0.00%	0.39%	0.25%	0.15%	0.15%	-3.54%	-2.89%	-2.82%	-2.63%	-2.71%
2002	352- Structures	-	-	-	-	NA	0.00%	0.39%	0.25%	0.15%	0.15%	-3.54%	-2.89%	-2.82%	-2.63%
2003	352- Structures	6,545	-	850	(850)	-12.99%	-12.99%	-5.10%	-4.83%	-3.66%	-2.49%	-2.49%	-5.20%	-4.17%	-4.09%
2004	352- Structures	-	-	-	-	NA	-12.99%	-12.99%	-5.10%	-4.83%	-3.66%	-2.49%	-2.49%	-5.20%	-4.17%
2005	352- Structures	-	-	-	-	NA	NA	-12.99%	-12.99%	-5.10%	-4.83%	-3.66%	-2.49%	-2.49%	-5.20%
2006	352- Structures	1,834	-	-	-	0.00%	0.00%	0.00%	-10.14%	-10.14%	-4.60%	-4.36%	-3.38%	-2.36%	-2.36%
2007	352- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	-10.14%	-10.14%	-4.60%	-4.36%	-3.38%	-2.36%
2008	352- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	-10.14%	-10.14%	-4.60%	-4.36%	-3.38%
2009	352- Structures	1,432	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-8.66%	-8.66%	-4.27%	-4.04%
2010	352- Structures	4,372	-	679	(679)	-15.52%	-11.69%	-11.69%	-11.69%	-8.89%	-8.89%	-8.89%	-10.78%	-10.78%	-6.29%
2011	352- Structures	-	-	-	-	NA	-15.52%	-11.69%	-11.69%	-11.69%	-8.89%	-8.89%	-8.89%	-10.78%	-10.78%
2012	352- Structures	17,639	-	-	-	0.00%	0.00%	-3.08%	-2.90%	-2.90%	-2.90%	-2.69%	-2.69%	-2.69%	-4.80%
2013	352- Structures	16,260	-	2,520	(2,520)	-15.50%	-7.44%	-7.44%	-8.36%	-8.06%	-8.06%	-8.06%	-7.70%	-7.70%	-7.70%
2014	352- Structures	2,451	-	-	-	0.00%	-13.47%	-6.93%	-6.93%	-7.86%	-7.59%	-7.59%	-7.59%	-7.27%	-7.27%
2015	352- Structures	11,440	-	962	(962)	-8.41%	-6.92%	-11.55%	-7.29%	-7.29%	-7.98%	-7.76%	-7.76%	-7.76%	-7.51%
2016	352- Structures	-	-	-	-	NA	-8.41%	-6.92%	-11.55%	-7.29%	-7.29%	-7.98%	-7.76%	-7.76%	-7.76%
2017	352- Structures	31,530	-	-	-	0.00%	0.00%	-2.24%	-2.12%	-5.65%	-4.39%	-4.39%	-4.97%	-4.89%	-4.89%
2018	352- Structures	12,942	-	5,375	(5,375)	-41.53%	-12.09%	-12.09%	-11.33%	-10.86%	-11.87%	-9.60%	-9.60%	-9.87%	-9.72%
1965	353- Station Equipment	5,035	-	-	-	0.00%									
1966	353- Station Equipment	-	-	-	-	NA	0.00%								
1967	353- Station Equipment	-	-	-	-	NA	NA	0.00%							
1968	353- Station Equipment	-	-	-	-	NA	NA	NA	0.00%						
1969	353- Station Equipment	3,574	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%					
1970	353- Station Equipment	1,556	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%				
1971	353- Station Equipment	4,337	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
1972	353- Station Equipment	6,243	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
1973	353- Station Equipment	251,447	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
1974	353- Station Equipment	24,004	694	259	435	1.81%	0.16%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%
1975	353- Station Equipment	72,258	-	-	-	0.00%	0.45%	0.13%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%
1976	353- Station Equipment	13,284	-	-	-	0.00%	0.00%	0.40%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%
1977	353- Station Equipment	3,445	150	426	(276)	-8.01%	-1.65%	-0.31%	0.14%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
1978	353- Station Equipment	9,421	2,566	780	1,786	18.96%	11.73%	5.77%	1.53%	1.59%	0.52%	0.51%	0.51%	0.50%	0.50%
1979	353- Station Equipment	70,870	5,626	655	4,971	7.01%	8.42%	7.74%	6.68%	3.83%	3.58%	1.56%	1.53%	1.52%	1.51%
1980	353- Station Equipment	23,149	-	983	(983)	-4.24%	4.24%	5.58%	5.14%	4.58%	2.86%	2.74%	1.27%	1.25%	1.24%
1981	353- Station Equipment	63,090	-	2,158	(2,158)	-3.42%	-3.64%	1.17%	2.17%	1.97%	1.82%	1.31%	1.35%	0.71%	0.70%
1982	353- Station Equipment	328,828	350	6,331	(5,981)	-1.82%	-2.08%	-2.20%	-0.85%	-0.48%	-0.53%	-0.52%	-0.45%	-0.36%	-0.26%
1983	353- Station Equipment	8,084	-	347	(347)	-4.29%	-1.88%	-2.12%	-2.24%	-0.91%	-0.54%	-0.59%	-0.57%	-0.50%	-0.41%
1984	353- Station Equipment	760,185	-	2,542	(2,542)	-0.33%	-0.37%	-0.79%	-0.93%	-1.00%	-0.55%	-0.41%	-0.43%	-0.43%	-0.40%
1985	353- Station Equipment	19,519	-	449	(449)	-2.30%	-0.37%	-0.41%	-0.82%	-0.96%	-1.02%	-0.58%	-0.44%	-0.46%	-0.45%
1986	353- Station Equipment	253,465	151	2,678	(2,526)	-1.00%	-1.09%	-0.52%	-0.55%	-0.85%	-0.96%	-1.02%	-0.65%	-0.53%	-0.55%
1987	353- Station Equipment	24,687	200	141	59	0.24%	-0.89%	-0.98%	-0.51%	-0.53%	-0.83%	-0.94%	-0.99%	-0.63%	-0.52%
1988	353- Station Equipment	41,780	-	2,621	(2,621)	-6.27%	-3.86%	-1.59%	-1.63%	-0.72%	-0.75%	-0.99%	-1.09%	-1.14%	-0.78%
1989	353- Station Equipment	34,043	-	7,726	(7,726)	-22.70%	-13.65%	-10.24%	-3.62%	-3.55%	-1.37%	-1.39%	-1.48%	-1.56%	-1.60%
1990	353- Station Equipment	410,741	24,094	18,602	5,492	1.34%	-0.50%	-1.00%	-0.94%	-0.98%	-0.99%	-0.66%	-0.68%	-0.88%	-0.96%
1991	353- Station Equipment	37,817	-	1,946	(1,946)	-5.15%	0.79%	-0.87%	-1.30%	-1.23%	-1.16%	-1.18%	-0.77%	-0.78%	-0.96%
1992	353- Station Equipment	129,609	-	4,455	(4,455)	-3.44%	-3.82%	-0.16%	-1.41%	-1.72%	-1.65%	-1.47%	-1.49%	-0.97%	-0.98%
1993	353- Station Equipment	1,259,780	12,200	2,267	9,933	0.79%	0.39%	0.25%	0.49%	0.07%	-0.07%	-0.07%	-0.17%	-0.19%	-0.23%
1994	353- Station Equipment	239,686	-	2,160	(2,160)	-0.90%	0.52%	0.20%	0.08%	0.33%	-0.04%	-0.16%	-0.16%	-0.24%	-0.26%
1995	353- Station Equipment	242,935	4,815	9,288	(4,473)	-1.84%	-1.37%	0.19%	-0.06%	-0.16%	0.10%	-0.23%	-0.33%	-0.33%	-0.39%
1996	353- Station Equipment	34,148	124	4,708	(4,584)	-13.42%	-3.27%	-2.17%	-0.07%	-0.30%	-0.40%	-0.09%	-0.42%	-0.52%	-0.51%
1997	353- Station Equipment	19,620	-	409	(409)	-2.08%	-9.29%	-3.19%	-2.17%	-0.09%	-0.32%	-0.41%	-0.11%	-0.43%	-0.53%
1998	353- Station Equipment	182,053	-	-	-	0.00%	-0.20%	-2.12%	-1.98%	-1.62%	-0.09%	-0.29%	-0.38%	-0.10%	-0.40%
1999	353- Station Equipment	192,792	34,103	806	33,297	17.27%	8.88%	8.34%	6.60%	3.55%	2.38%	1.46%	1.18%	1.08%	1.12%
2000	353- Station Equipment	339,531	-	-	-	0.00%	6.26%	4.66%	4.48%	3.66%	2.36%	1.73%	1.26%	1.03%	0.94%
2001	353- Station Equipment	461,633	-	3,305	(3,305)	-0.72%	-0.41%	3.02%	2.55%	2.47%	2.03%	1.39%	1.07%	0.95%	0.77%
2002	353- Station Equipment	124,490	-	346	(346)	-0.28%	-0.62%	-0.39%	2.65%	2.28%	2.21%	1.82%	1.26%	0.98%	0.90%
2003	353- Station Equipment	269,518	-	8,207	(8,207)	-3.05%	-2.17%	-1.39%	-0.99%	1.54%	1.37%	1.32%	1.01%	0.64%	0.47%
2004	353- Station Equipment	7,785,162	-	1,415	(1,415)	-0.02%	-0.12%	-0.12%	-0.15%	-0.15%	0.22%	0.21%	0.21%	0.16%	0.11%
2005	353- Station Equipment	65,400	-	5,622	(5,622)	-8.60%	-0.09%	-0.19%	-0.19%	-0.22%	-0.21%	0.16%	0.15%	0.15%	0.10%
2006	353- Station Equipment	1,165,164	-	16,328	(16,328)	-1.40%	-1.78%	-0.26%	-0.34%	-0.34%	-0.36%	-0.34%	-0.02%	-0.02%	-0.02%
2007	353- Station Equipment	2,399,085	400	992	(592)	-0.02%	-0.47%	-0.62%	-0.21%	-0.28%	-0.28%	-0.29%	-0.28%	-0.02%	-0.02%
2008	353- Station Equipment	43,008	-	10,331	(10,331)	-24.02%	-0.45%	-0.76%	-0.90%	-0.30%	-0.36%	-0.36%	-0.37%	-0.36%	-0.10%
2009	353- Station Equipment	2,438	-	-	-	0.00%	-22.73%	-0.45%	-0.75%	-0.89%	-0.30%	-0.36%	-0.36%	-0.37%	-0.36%
2010	353- Station Equipment	310,037	83,985	28,368	55,617	17.94%	17.80%	12.74%	1.62%	0.72%	0.57%	0.18%	0.11%	0.11%	0.08%
2011	353- Station Equipment	192,774	18,921	490	18,431	9.56%	14.73%	14.66%	11.62%	2.14%	1.14%	0.99%	0.33%	0.26%	0.25%
2012	353- Station Equipment	448,926	-	27,869	(27,869)	-6.21%	-1.47%	4.85%	4.84%	3.59%	1.04%	0.41%	0.29%	0.10%	0.03%
2013	353- Station Equipment	1,781,093	-	7,364	(7,364)	-0.41%	-1.58%	-0.69%	1.42%	1.42%	1.03%	0.54%	0.18%	0.09%	0.03%
2014	353- Station Equipment	1,118,551	235,396	554	234,842	21.00%	7.85%	5.96%	6.16%	7.11%	7.10%	6.76%	4.17%	3.30%	3.20%
2015	353- Station Equipment	1,901,091	-	6,480	(6,480)	-0.34%	7.56%	4.60%	3.68%	3.89%	4.64%	4.64%	4.43%	3.13%	2.56%
2016	353- Station Equipment	456,706	-	1,258	(1,258)	-0.28%	-0.33%	6.53%	4.18%	3.36%	3.56%	4.28%	4.28%	4.09%	2.95%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2017	353- Station Equipment	611,285	-	-	-	0.00%	-0.12%	-0.26%	5.56%	3.74%	3.04%	3.23%	3.90%	3.90%	3.72%
2018	353- Station Equipment	1,438,645	56,156	2,625	53,530	3.72%	2.61%	2.09%	1.04%	5.08%	3.74%	3.16%	3.32%	3.87%	3.87%
		25,706,022	479,930	194,290	285,640	1.11%									
1991	354- Towers	3,667	2,459	145	2,314	63.12%									
1992	354- Towers	-	-	-	-	NA	63.12%								
1993	354- Towers	-	-	-	-	NA	NA	63.12%							
1994	354- Towers	-	-	-	-	NA	NA	NA	63.12%						
1995	354- Towers	-	-	-	-	NA	NA	NA	NA	63.12%					
1996	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	63.12%				
1997	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	63.12%			
1998	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	63.12%		
1999	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	63.12%	
2000	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	63.12%
2001	354- Towers	445	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2002	354- Towers	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2003	354- Towers	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2004	354- Towers	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	354- Towers	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2006	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2007	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2008	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2009	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2010	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2011	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2012	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2017	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2018	354- Towers	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	355-Poles, Towers & Fixtures	6,348	-	-	-	0.00%									
2012	355-Poles, Towers & Fixtures	119,044	-	231,444	(231,444)	-194.42%	-184.58%								
2013	355-Poles, Towers & Fixtures	20,887	-	14,411	(14,411)	-69.00%	-175.70%	-168.07%							
2014	355-Poles, Towers & Fixtures	118,916	-	160,772	(160,772)	-135.20%	-125.31%	-157.09%	-153.33%						
2015	355-Poles, Towers & Fixtures	-	-	-	-	NA	-135.20%	-125.31%	-157.09%	-153.33%					
2016	355-Poles, Towers & Fixtures	44,650	-	91,379	(91,379)	-204.66%	-204.66%	-154.16%	-144.52%	-164.09%	-160.73%				
2017	355-Poles, Towers & Fixtures	53,168	-	52,904	(52,904)	-99.50%	-147.50%	-147.50%	-140.75%	-134.44%	-154.46%	-151.76%			
2018	355-Poles, Towers & Fixtures	43,860	-	44,321	(44,321)	-101.05%	-100.20%	-133.12%	-133.12%	-134.07%	-129.24%	-148.61%	-146.29%		
2011	356- Overehead Conductor	621	-	-	-	0.00%									
2012	356- Overehead Conductor	23,233	-	77	(77)	-0.33%	-0.32%								
2013	356- Overehead Conductor	24,969	-	13,617	(13,617)	-54.53%	-28.41%	-28.05%							
2014	356- Overehead Conductor	60,437	-	27,088	(27,088)	-44.82%	-47.66%	-37.54%	-37.33%						
2015	356- Overehead Conductor	-	-	-	-	NA	-44.82%	-47.66%	-37.54%	-37.33%					
2016	356- Overehead Conductor	36,970	-	121,123	(121,123)	-327.62%	-327.62%	-152.16%	-132.24%	-111.19%	-110.72%				
2017	356- Overehead Conductor	48,280	-	14,565	(14,565)	-30.17%	-159.17%	-159.17%	-111.73%	-103.36%	-91.02%	-90.73%			
2018	356- Overehead Conductor	12,235	-	10,145	(10,145)	-82.91%	-40.83%	-149.59%	-149.59%	-109.50%	-101.99%	-90.54%	-90.26%		
1979	389- Land	1,087	-	-	-	0.00%									
1980	389- Land	-	-	-	-	NA	0.00%								
1981	389- Land	-	-	-	-	NA	NA	0.00%							
1982	389- Land	-	-	-	-	NA	NA	NA	0.00%						
1983	389- Land	-	-	-	-	NA	NA	NA	NA	0.00%					
1984	389- Land	-	-	-	-	NA	NA	NA	NA	NA	0.00%				
1985	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%			
1986	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%		
1987	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	
1988	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
1989	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1990	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1991	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1992	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1993	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1994	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1995	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1996	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1997	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1998	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1999	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2000	389- Land	233,646	61,470	-	61,470	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%
2001	389- Land	-	-	-	-	NA	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%
2002	389- Land	-	-	-	-	NA	NA	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%
2003	389- Land	-	-	-	-	NA	NA	NA	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%
2004	389- Land	-	-	-	-	NA	NA	NA	NA	26.31%	26.31%	26.31%	26.31%	26.31%	26.31%
2005	389- Land	-	-	-	-	NA	NA	NA	NA	NA	26.31%	26.31%	26.31%	26.31%	26.31%
2006	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	26.31%	26.31%	26.31%	26.31%
2007	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	26.31%	26.31%	26.31%
2008	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	26.31%	26.31%
2009	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	26.31%
2010	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2011	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2017	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2018	389- Land	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1972	390- Structures	4,598	-	-	-	0.00%									
1973	390- Structures	-	-	-	-	NA	0.00%								
1974	390- Structures	2,500	-	-	-	0.00%	0.00%	0.00%							
1975	390- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%						
1976	390- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%					
1977	390- Structures	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%				
1978	390- Structures	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%			
1979	390- Structures	3,716	3,052	-	3,052	82.14%	82.14%	82.14%	82.14%	82.14%	49.10%	49.10%	28.22%		
1980	390- Structures	-	-	-	-	NA	82.14%	82.14%	82.14%	82.14%	82.14%	49.10%	49.10%	28.22%	
1981	390- Structures	-	-	-	-	NA	NA	82.14%	82.14%	82.14%	82.14%	82.14%	49.10%	49.10%	28.22%
1982	390- Structures	-	-	-	-	NA	NA	NA	82.14%	82.14%	82.14%	82.14%	82.14%	49.10%	49.10%
1983	390- Structures	61,332	325	6,270	(5,945)	-9.69%	-9.69%	-9.69%	-9.69%	-4.45%	-4.45%	-4.45%	-4.45%	-4.45%	-4.28%
1984	390- Structures	-	-	-	-	NA	-9.69%	-9.69%	-9.69%	-9.69%	-4.45%	-4.45%	-4.45%	-4.45%	-4.45%
1985	390- Structures	-	-	-	-	NA	NA	-9.69%	-9.69%	-9.69%	-9.69%	-4.45%	-4.45%	-4.45%	-4.45%
1986	390- Structures	-	-	-	-	NA	NA	NA	-9.69%	-9.69%	-9.69%	-9.69%	-4.45%	-4.45%	-4.45%
1987	390- Structures	-	-	-	-	NA	NA	NA	NA	-9.69%	-9.69%	-9.69%	-9.69%	-4.45%	-4.45%
1988	390- Structures	-	-	-	-	NA	NA	NA	NA	NA	-9.69%	-9.69%	-9.69%	-9.69%	-4.45%
1989	390- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	-9.69%	-9.69%	-9.69%	-9.69%
1990	390- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	-9.69%	-9.69%	-9.69%
1991	390- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	-9.69%	-9.69%
1992	390- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	-9.69%	-9.69%
1993	390- Structures	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	-9.69%
1994	390- Structures	5,086	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1995	390- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1996	390- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	390- Structures	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1998	390- Structures	18,258	625	-	625	3.42%	3.42%	3.42%	3.42%	2.68%	2.68%	2.68%	2.68%	2.68%	2.68%
1999	390- Structures	-	-	-	-	NA	3.42%	3.42%	3.42%	3.42%	2.68%	2.68%	2.68%	2.68%	2.68%
2000	390- Structures	984,851	259,104	-	259,104	26.31%	26.31%	25.89%	25.89%	25.89%	25.89%	25.76%	25.76%	25.76%	25.76%
2001	390- Structures	1,737	-	-	-	0.00%	26.26%	26.26%	25.85%	25.85%	25.85%	25.85%	25.72%	25.72%	25.72%
2002	390- Structures	1,099	-	-	-	0.00%	0.00%	26.23%	26.23%	25.82%	25.82%	25.82%	25.82%	25.69%	25.69%
2003	390- Structures	-	-	-	-	NA	0.00%	0.00%	26.23%	26.23%	25.82%	25.82%	25.82%	25.82%	25.69%
2004	390- Structures	3,761	-	-	-	0.00%	0.00%	0.00%	0.00%	26.13%	26.13%	25.72%	25.72%	25.72%	25.72%
2005	390- Structures	36,488	-	9,864	(9,864)	-27.03%	-24.51%	-24.51%	-23.86%	-22.89%	24.25%	24.25%	23.88%	23.88%	23.88%
2006	390- Structures	2,514	-	-	-	0.00%	-25.29%	-23.07%	-23.07%	-22.49%	-21.63%	24.19%	24.19%	23.83%	23.83%
2007	390- Structures	2,873	-	-	-	0.00%	0.00%	-23.56%	-21.61%	-21.61%	-21.11%	-20.35%	24.12%	24.12%	23.76%
2008	390- Structures	(120)	-	-	-	0.00%	0.00%	0.00%	-23.62%	-21.67%	-21.67%	-21.16%	-20.40%	24.12%	24.12%
2009	390- Structures	-	-	-	-	NA	0.00%	0.00%	0.00%	-23.62%	-21.67%	-21.67%	-21.16%	-20.40%	24.12%
2010	390- Structures	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	-23.62%	-21.67%	-21.67%	-21.16%	-20.40%
2011	390- Structures	258,221	1,446	-	1,446	0.56%	0.56%	0.56%	0.56%	0.55%	0.55%	-2.81%	-2.77%	-2.77%	-2.76%
2012	390- Structures	35,781	-	-	-	0.00%	0.49%	0.49%	0.49%	0.49%	0.49%	0.48%	-2.51%	-2.48%	-2.48%
2014	390- Structures	6,971	-	8,115	(8,115)	-116.42%	-18.98%	-2.22%	-2.22%	-2.22%	-2.22%	-2.20%	-2.18%	-4.82%	-4.77%
2015	390- Structures	44,349	-	28,308	(28,308)	-63.83%	-70.97%	-41.82%	-10.13%	-10.13%	-10.13%	-10.13%	-10.05%	-9.98%	-11.58%
2016	390- Structures	-	-	-	-	NA	-63.83%	-70.97%	-41.82%	-10.13%	-10.13%	-10.13%	-10.13%	-10.05%	-9.98%
2017	390- Structures	58,166	-	-	-	0.00%	0.00%	-27.61%	-33.27%	-25.07%	-8.67%	-8.67%	-8.67%	-8.67%	-8.61%
2018	390- Structures	100,241	-	-	-	0.00%	0.00%	0.00%	-13.96%	-17.37%	-14.84%	-6.94%	-6.94%	-6.94%	-6.95%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1978	391.0/6/7- Office Furniture & Equipment	1,444	36	-	36	2.49%									
1979	391.0/6/7- Office Furniture & Equipment	6,879	432	80	352	5.11%	4.66%								
1980	391.0/6/7- Office Furniture & Equipment	3,291	40	-	40	1.22%	3.85%	3.68%							
1981	391.0/6/7- Office Furniture & Equipment	2,175	850	-	850	39.08%	16.28%	10.06%	9.27%						
1982	391.0/6/7- Office Furniture & Equipment	11,112	2,722	-	2,722	24.50%	26.89%	21.79%	16.90%	16.06%					
1983	391.0/6/7- Office Furniture & Equipment	12,216	2,220	-	2,220	18.17%	21.18%	22.71%	20.25%	17.33%	16.76%				
1984	391.0/6/7- Office Furniture & Equipment	12,836	1,396	-	1,396	10.87%	14.43%	17.52%	18.75%	17.36%	15.63%	15.25%			
1985	391.0/6/7- Office Furniture & Equipment	9,631	20	-	20	0.21%	6.30%	10.48%	13.88%	15.03%	14.14%	13.07%	12.81%		
1986	391.0/6/7- Office Furniture & Equipment	38,293	1,593	-	1,593	4.16%	3.37%	4.95%	7.16%	9.45%	10.20%	9.87%	9.53%	9.43%	
1987	391.0/6/7- Office Furniture & Equipment	18,352	3,517	-	3,517	19.16%	9.02%	7.74%	8.25%	9.57%	11.19%	11.77%	11.45%	11.07%	10.97%
1988	391.0/6/7- Office Furniture & Equipment	58,299	6,776	-	6,776	11.62%	13.43%	10.34%	9.56%	9.68%	10.37%	11.35%	11.72%	11.51%	11.26%
1989	391.0/6/7- Office Furniture & Equipment	48,703	670	-	670	1.38%	6.96%	8.74%	7.67%	7.26%	7.51%	8.16%	9.03%	9.34%	9.21%
1990	391.0/6/7- Office Furniture & Equipment	74,156	7,281	-	7,281	9.82%	6.47%	8.13%	9.14%	8.34%	8.02%	8.17%	8.61%	9.24%	9.46%
1991	391.0/6/7- Office Furniture & Equipment	86,235	31,253	-	31,253	36.24%	24.03%	18.75%	17.20%	17.32%	15.77%	15.32%	15.15%	15.26%	15.53%
1992	391.0/6/7- Office Furniture & Equipment	79,202	6,657	-	6,657	8.40%	22.91%	18.86%	15.91%	15.19%	15.39%	14.32%	13.99%	13.90%	14.02%
1993	391.0/6/7- Office Furniture & Equipment	9,177	113	-	113	1.23%	7.66%	21.78%	18.21%	15.45%	14.83%	15.04%	14.03%	13.71%	13.63%
1994	391.0/6/7- Office Furniture & Equipment	84,556	8,011	-	8,011	9.47%	8.67%	8.55%	17.76%	15.99%	14.13%	13.80%	14.01%	13.25%	13.01%
1995	391.0/6/7- Office Furniture & Equipment	7,290	326	-	326	4.48%	9.08%	8.36%	8.38%	17.40%	15.75%	13.95%	13.65%	13.86%	13.13%
1996	391.0/6/7- Office Furniture & Equipment	32,731	4,000	-	4,000	12.22%	10.81%	9.90%	9.31%	8.97%	16.83%	15.44%	13.82%	13.55%	13.76%
1997	391.0/6/7- Office Furniture & Equipment	5,122	5	-	5	0.09%	10.58%	9.59%	9.52%	8.97%	8.76%	16.55%	15.23%	13.85%	13.41%
1998	391.0/6/7- Office Furniture & Equipment	823,912	84,488	-	84,488	10.25%	10.19%	10.27%	10.22%	10.15%	10.07%	9.94%	11.95%	11.82%	11.41%
1999	391.0/6/7- Office Furniture & Equipment	610,952	184,076	-	184,076	30.13%	18.72%	18.65%	18.51%	18.44%	17.95%	17.86%	17.40%	18.34%	17.99%
2000	391.0/6/7- Office Furniture & Equipment	253,451	1,520	-	1,520	0.60%	21.47%	16.00%	15.95%	15.88%	15.83%	15.53%	15.46%	15.17%	16.08%
2001	391.0/6/7- Office Furniture & Equipment	164,948	-	-	-	0.00%	0.36%	18.03%	14.57%	14.53%	14.49%	14.46%	14.24%	14.18%	13.96%
2002	391.0/6/7- Office Furniture & Equipment	98,450	2,500	-	2,500	2.54%	0.95%	0.78%	16.68%	13.97%	13.93%	13.90%	13.87%	13.69%	13.63%
2003	391.0/6/7- Office Furniture & Equipment	22,360	-	-	-	0.00%	2.07%	0.87%	0.75%	16.35%	13.81%	13.77%	13.75%	13.71%	13.54%
2004	391.0/6/7- Office Furniture & Equipment	59,698	-	-	-	0.00%	0.00%	1.38%	0.72%	0.67%	15.55%	13.40%	13.37%	13.35%	13.32%
2005	391.0/6/7- Office Furniture & Equipment	60,703	1,590	726	864	1.42%	0.72%	0.60%	1.39%	0.83%	0.74%	14.87%	13.06%	13.02%	13.01%
2006	391.0/6/7- Office Furniture & Equipment	5,129	-	-	-	0.00%	1.31%	0.69%	0.58%	1.37%	0.82%	0.73%	14.81%	13.02%	12.99%
2007	391.0/6/7- Office Furniture & Equipment	22,689	-	-	-	0.00%	0.00%	0.98%	0.58%	0.51%	1.25%	0.76%	0.71%	14.55%	12.88%
2008	391.0/6/7- Office Furniture & Equipment	25,457	-	-	-	0.00%	0.00%	0.00%	0.76%	0.50%	0.44%	1.14%	0.73%	0.69%	14.27%
2009	391.0/6/7- Office Furniture & Equipment	4,748	-	-	-	0.00%	0.00%	0.00%	0.00%	0.73%	0.48%	0.43%	1.12%	0.72%	0.68%
2010	391.0/6/7- Office Furniture & Equipment	47,688	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.52%	0.38%	0.35%	0.97%	0.66%
2011	391.0/6/7- Office Furniture & Equipment	22,733	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.46%	0.35%	0.32%	0.91%
2012	391.0/6/7- Office Furniture & Equipment	41,814	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.37%	0.30%	0.28%
2013	391.0/6/7- Office Furniture & Equipment	19,275	-	18	(18)	-0.10%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	0.34%	0.27%
2014	391.0/6/7- Office Furniture & Equipment	3,064	-	-	-	0.00%	-0.08%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	0.33%
2015	391.0/6/7- Office Furniture & Equipment	-	-	-	-	NA	0.00%	-0.08%	-0.03%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
2016	391.0/6/7- Office Furniture & Equipment	23,021	-	-	-	0.00%	0.00%	0.00%	-0.04%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%
2017	391.0/6/7- Office Furniture & Equipment	10,152	-	-	-	0.00%	0.00%	0.00%	0.00%	-0.03%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%
2018	391.0/6/7- Office Furniture & Equipment	170,174	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%
1986	391.2- Computer	6,339	2,952	-	2,952	46.57%									
1987	391.2- Computer	102,442	2,857	-	2,857	2.79%	5.34%								
1988	391.2- Computer	348,449	3,237	-	3,237	0.93%	1.35%	1.98%							
1989	391.2- Computer	96,391	2,267	-	2,267	2.35%	1.24%	1.53%	2.04%						
1990	391.2- Computer	584,760	16,343	-	16,343	2.79%	2.73%	2.12%	2.18%	2.43%					
1991	391.2- Computer	26,119	700	-	700	2.68%	2.79%	2.73%	2.14%	2.19%	2.44%				
1992	391.2- Computer	185,213	8,700	-	8,700	4.70%	4.45%	3.23%	3.14%	2.52%	2.54%	2.75%			
1993	391.2- Computer	192,662	6,100	-	6,100	3.17%	3.92%	3.84%	3.22%	3.14%	2.61%	2.62%	2.80%		
1994	391.2- Computer	124,760	2,800	-	2,800	2.24%	2.80%	3.50%	3.46%	3.11%	3.05%	2.58%	2.59%	2.76%	
1995	391.2- Computer	36,495	-	-	-	0.00%	1.74%	2.51%	3.26%	3.24%	3.01%	2.96%	2.52%	2.53%	2.70%
1996	391.2- Computer	50,601	-	-	-	0.00%	0.00%	1.32%	2.20%	2.98%	2.97%	2.89%	2.85%	2.44%	2.46%
1997	391.2- Computer	-	-	-	-	NA	0.00%	0.00%	1.32%	2.20%	2.98%	2.97%	2.89%	2.85%	2.44%
1998	391.2- Computer	826,943	30,031	-	30,031	3.63%	3.63%	3.42%	3.29%	3.16%	3.16%	3.36%	3.35%	3.19%	3.15%
1999	391.2- Computer	921,279	-	-	-	0.00%	1.72%	1.72%	1.67%	1.64%	1.67%	1.81%	2.04%	2.04%	2.19%
2000	391.2- Computer	239,043	82	-	82	0.03%	0.01%	1.52%	1.52%	1.48%	1.45%	1.50%	1.63%	1.85%	1.86%
2001	391.2- Computer	632,084	-	-	-	0.00%	0.01%	0.00%	1.15%	1.15%	1.13%	1.11%	1.16%	1.29%	1.49%
2002	391.2- Computer	35,782	-	-	-	0.00%	0.00%	0.01%	0.00%	1.13%	1.13%	1.11%	1.10%	1.15%	1.28%
2003	391.2- Computer	17,817	-	-	-	0.00%	0.00%	0.00%	0.01%	0.00%	1.13%	1.13%	1.11%	1.09%	1.14%
2004	391.2- Computer	503,286	-	-	-	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.95%	0.95%	0.93%	0.92%
2005	391.2- Computer	542,314	30,965	-	30,965	5.71%	2.96%	2.91%	2.82%	1.79%	1.58%	1.07%	1.64%	1.64%	1.62%
2006	391.2- Computer	80,829	-	-	-	0.00%	4.97%	2.75%	2.71%	2.62%	1.71%	1.51%	1.04%	1.61%	1.61%
2007	391.2- Computer	333,455	350	-	350	0.10%	0.08%	3.27%	2.15%	2.12%	2.07%	1.46%	1.32%	0.95%	1.49%
2008	391.2- Computer	205,735	-	-	-	0.00%	0.06%	0.06%	2.69%	1.88%	1.86%	1.82%	1.33%	1.21%	0.89%
2009	391.2- Computer	125,711	300	-	300	0.24%	0.09%	0.10%	0.09%	2.45%	1.76%	1.75%	1.71%	1.28%	1.17%
2010	391.2- Computer	88,697	-	-	-	0.00%	0.14%	0.07%	0.09%	0.08%	2.30%	1.68%	1.67%	1.64%	1.23%
2011	391.2- Computer	-	-	-	-	NA	0.00%	0.14%	0.07%	0.09%	0.08%	2.30%	1.68%	1.67%	1.64%
2012	391.2- Computer	-	-	-	-	NA	NA	0.00%	0.14%	0.07%	0.09%	0.08%	2.30%	1.68%	1.67%
2013	391.2- Computer	102,017	605	297	308	0.30%	0.30%	0.30%	0.16%	0.19%	0.12%	0.11%	0.10%	2.16%	1.61%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2014	391.2- Computer	256,490	-	-	-	0.00%	0.09%	0.09%	0.09%	0.07%	0.11%	0.08%	0.09%	0.08%	1.84%
2015	391.2- Computer	2,523,731	-	-	-	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.02%	0.02%	0.03%	0.03%
2016	391.2- Computer	385,690	-	-	-	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.02%	0.02%	0.02%
2017	391.2- Computer	679,202	-	-	-	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
2018	391.2- Computer	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%
1988	391.3- Engineering Computer	5,090	-	-	-	0.00%									
1989	391.3- Engineering Computer	-	-	-	-	NA	0.00%								
1990	391.3- Engineering Computer	24,877	1,500	-	1,500	6.03%	6.03%	5.01%							
1991	391.3- Engineering Computer	-	-	-	-	NA	6.03%	6.03%	5.01%						
1992	391.3- Engineering Computer	-	-	-	-	NA	NA	6.03%	6.03%	5.01%					
1993	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	6.03%	6.03%	5.01%				
1994	391.3- Engineering Computer	471,939	-	-	-	0.00%	0.00%	0.00%	0.00%	0.30%	0.30%	0.30%			
1995	391.3- Engineering Computer	1,293	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.30%	0.30%		
1996	391.3- Engineering Computer	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.30%	0.30%	
1997	391.3- Engineering Computer	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.30%	0.30%
1998	391.3- Engineering Computer	653	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.30%
1999	391.3- Engineering Computer	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%
2000	391.3- Engineering Computer	1,367	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2001	391.3- Engineering Computer	60,261	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2002	391.3- Engineering Computer	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2003	391.3- Engineering Computer	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2004	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2005	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2006	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%
2007	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%
2008	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%
2009	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	0.00%
2010	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2011	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2012	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2013	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2016	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2017	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2018	391.3- Engineering Computer	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	392.2- Vehicles General	3,816	-	-	-										
1977	392.2- Vehicles General	20,858	1,699	-	1,699	8.14%									
1978	392.2- Vehicles General	25,542	9,704	-	9,704	37.99%	24.58%								
1979	392.2- Vehicles General	50,625	5,256	-	5,256	10.38%	19.64%	17.17%							
1980	392.2- Vehicles General	67,299	9,651	-	9,651	14.34%	12.64%	17.15%	16.01%						
1981	392.2- Vehicles General	29,321	2,072	-	2,072	7.07%	12.13%	11.53%	15.44%	14.66%					
1982	392.2- Vehicles General	50,194	6,917	-	6,917	13.78%	11.31%	12.70%	12.10%	15.07%	14.48%				
1983	392.2- Vehicles General	67,323	17,251	-	17,251	25.62%	20.57%	17.87%	16.76%	15.54%	17.52%	16.89%			
1984	392.2- Vehicles General	69,038	8,066	-	8,066	11.68%	18.57%	17.28%	15.89%	15.52%	14.74%	16.40%	15.94%		
1985	392.2- Vehicles General	156,989	31,604	-	31,604	20.13%	17.55%	19.40%	18.58%	17.68%	17.17%	16.47%	17.53%	17.17%	
1986	392.2- Vehicles General	166,898	43,198	-	43,198	25.88%	23.09%	21.09%	21.75%	20.97%	20.21%	19.56%	18.86%	19.57%	19.23%
1987	392.2- Vehicles General	31,901	6,005	-	6,005	18.82%	24.75%	22.71%	20.92%	21.56%	20.84%	20.14%	19.53%	18.85%	19.54%
1988	392.2- Vehicles General	103,137	19,684	-	19,684	19.08%	19.02%	22.81%	21.80%	20.56%	21.13%	20.56%	19.98%	19.46%	18.88%
1989	392.2- Vehicles General	107,488	20,787	-	20,787	19.34%	19.21%	19.16%	21.90%	21.41%	20.35%	20.86%	20.39%	19.89%	19.45%
1990	392.2- Vehicles General	197,186	46,360	-	46,360	23.51%	22.04%	21.29%	21.11%	22.43%	21.95%	21.10%	21.44%	21.04%	20.62%
1991	392.2- Vehicles General	265,309	58,617	-	58,617	22.09%	22.70%	22.06%	21.61%	21.48%	22.32%	21.99%	21.34%	21.59%	21.27%
1992	392.2- Vehicles General	204,469	69,724	-	69,724	34.10%	27.32%	26.19%	25.24%	24.52%	24.32%	24.56%	24.00%	23.34%	23.46%
1993	392.2- Vehicles General	59,955	4,363	-	4,363	7.28%	28.02%	25.05%	24.63%	23.95%	23.42%	23.26%	23.65%	23.22%	22.64%
1994	392.2- Vehicles General	130,235	20,800	-	20,800	15.97%	13.23%	24.04%	23.26%	23.32%	22.87%	22.51%	22.40%	22.86%	22.56%
1995	392.2- Vehicles General	85,465	18,075	-	18,075	21.15%	18.02%	15.69%	23.53%	23.02%	23.12%	22.73%	22.41%	22.31%	22.75%
1996	392.2- Vehicles General	50,415	4,403	-	4,403	8.73%	16.54%	16.26%	14.61%	22.12%	22.11%	22.39%	22.09%	21.83%	21.76%
1997	392.2- Vehicles General	77,751	2,050	-	2,050	2.64%	5.03%	11.48%	13.18%	12.31%	19.63%	20.38%	20.96%	20.81%	20.67%
1998	392.2- Vehicles General	1,361,164	130,722	-	130,722	9.60%	9.23%	9.21%	9.86%	10.33%	10.22%	12.70%	13.82%	14.60%	14.80%
1999	392.2- Vehicles General	32,959	3,685	-	3,685	11.18%	9.64%	9.27%	9.25%	9.89%	10.34%	10.24%	12.68%	13.78%	14.56%
2000	392.2- Vehicles General	66,492	9,500	-	9,500	14.29%	13.26%	9.85%	9.49%	9.46%	10.06%	10.49%	10.38%	12.73%	13.79%
2001	392.2- Vehicles General	66,715	12,490	-	12,490	18.72%	16.51%	15.45%	10.24%	9.87%	9.84%	10.39%	10.78%	10.67%	12.91%
2002	392.2- Vehicles General	196,182	28,919	-	28,919	14.74%	15.75%	15.46%	15.07%	10.75%	10.40%	10.36%	10.83%	11.16%	11.05%
2003	392.2- Vehicles General	86,515	10,320	-	10,320	11.93%	13.88%	14.80%	14.72%	14.46%	10.81%	10.47%	10.43%	10.88%	11.19%
2004	392.2- Vehicles General	17,128	1,780	-	1,780	10.39%	11.67%	13.68%	14.60%	14.55%	14.31%	10.80%	10.47%	10.43%	10.88%
2005	392.2- Vehicles General	46,658	8,165	-	8,165	17.50%	15.59%	13.48%	14.20%	14.93%	14.84%	14.60%	10.97%	10.64%	10.59%
2006	392.2- Vehicles General	67,321	13,195	-	13,195	19.60%	18.74%	17.65%	15.38%	15.07%	15.58%	15.42%	15.18%	11.27%	10.94%
2007	392.2- Vehicles General	125,647	23,907	-	23,907	19.03%	19.23%	18.89%	18.32%	16.71%	15.99%	16.30%	16.10%	15.87%	11.74%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2008	392.2- Vehicles General	72,235	8,335	-	8,335	11.54%	16.29%	17.13%	17.19%	16.83%	15.81%	15.47%	15.79%	15.65%	15.47%
2009	392.2- Vehicles General	36,696	8,549	-	8,549	23.30%	15.50%	17.39%	17.88%	17.83%	17.48%	16.42%	15.91%	16.17%	16.01%
2010	392.2- Vehicles General	19,629	790	-	790	4.02%	16.58%	13.75%	16.36%	17.04%	17.09%	16.80%	15.90%	15.56%	15.85%
2011	392.2- Vehicles General	-	-	-	-	NA	4.02%	16.58%	13.75%	16.36%	17.04%	17.09%	16.80%	15.90%	15.56%
2012	392.2- Vehicles General	217,957	23,745	-	23,745	10.89%	10.89%	10.33%	12.06%	11.95%	13.84%	14.55%	14.79%	14.66%	14.32%
2013	392.2- Vehicles General	37,966	4,690	-	4,690	12.35%	11.11%	11.11%	10.61%	12.10%	11.99%	13.72%	14.41%	14.64%	14.53%
2014	392.2- Vehicles General	250,126	59,015	-	59,015	23.59%	22.11%	17.28%	17.28%	16.79%	17.21%	16.57%	16.97%	17.19%	17.20%
2015	392.2- Vehicles General	98,199	17,160	-	17,160	17.47%	21.87%	20.93%	17.31%	17.31%	16.89%	17.25%	16.69%	17.03%	17.22%
2016	392.2- Vehicles General	86,699	33,325	-	33,325	38.44%	27.30%	25.17%	24.14%	19.96%	19.96%	19.52%	19.71%	18.99%	18.99%
2017	392.2- Vehicles General	63,036	4,905	-	4,905	7.78%	25.53%	22.34%	22.97%	22.22%	18.94%	18.94%	18.57%	18.78%	18.19%
2018	392.2- Vehicles General	62,866	8,889	-	8,889	14.14%	10.96%	22.16%	20.66%	21.98%	21.37%	18.57%	18.57%	18.23%	18.45%
1983	392.3- Vehicles Transmission	49,639	14,600	-	14,600	29.41%									
1984	392.3- Vehicles Transmission	-	-	-	-	NA	29.41%								
1985	392.3- Vehicles Transmission	-	-	-	-	NA	NA	29.41%							
1986	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	29.41%						
1987	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	29.41%					
1988	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	NA	29.41%				
1989	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	NA	NA	29.41%			
1990	392.3- Vehicles Transmission	67,679	51,500	-	51,500	76.09%	76.09%	76.09%	76.09%	76.09%	76.09%	76.09%	56.34%		
1991	392.3- Vehicles Transmission	6,228	4,000	-	4,000	64.23%	75.09%	75.09%	75.09%	75.09%	75.09%	75.09%	75.09%	56.74%	
1992	392.3- Vehicles Transmission	121,703	-	-	-	0.00%	3.13%	28.37%	28.37%	28.37%	28.37%	28.37%	28.37%	28.37%	28.58%
1993	392.3- Vehicles Transmission	5,000	2,500	-	2,500	50.00%	1.97%	4.89%	28.91%	28.91%	28.91%	28.91%	28.91%	28.91%	28.91%
1994	392.3- Vehicles Transmission	23,388	2,500	-	2,500	10.69%	17.61%	3.33%	5.76%	27.01%	27.01%	27.01%	27.01%	27.01%	27.01%
1995	392.3- Vehicles Transmission	12,865	-	-	-	0.00%	6.90%	12.12%	3.07%	5.32%	25.54%	25.54%	25.54%	25.54%	25.54%
1996	392.3- Vehicles Transmission	34,768	1,500	-	1,500	4.31%	3.15%	5.63%	8.55%	3.29%	5.15%	22.82%	22.82%	22.82%	22.82%
1997	392.3- Vehicles Transmission	-	-	-	-	NA	4.31%	3.15%	5.63%	8.55%	3.29%	5.15%	22.82%	22.82%	22.82%
1998	392.3- Vehicles Transmission	186,258	16,500	-	16,500	8.86%	8.86%	8.14%	7.70%	7.97%	8.77%	5.99%	6.92%	17.14%	17.14%
1999	392.3- Vehicles Transmission	-	-	-	-	NA	8.86%	8.86%	8.14%	7.70%	7.97%	8.77%	5.99%	6.92%	17.14%
2000	392.3- Vehicles Transmission	-	-	-	-	NA	NA	8.86%	8.86%	8.14%	7.70%	7.97%	8.77%	5.99%	6.92%
2001	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	8.86%	8.86%	8.14%	7.70%	7.97%	8.77%	5.99%
2002	392.3- Vehicles Transmission	21,313	2,180	-	2,180	10.23%	10.23%	10.23%	10.23%	9.00%	9.00%	8.33%	7.91%	8.14%	8.88%
2003	392.3- Vehicles Transmission	150,672	19,700	-	19,700	13.07%	12.72%	12.72%	12.72%	12.72%	10.71%	10.71%	10.15%	9.83%	9.87%
2004	392.3- Vehicles Transmission	-	-	-	-	NA	13.07%	12.72%	12.72%	12.72%	12.72%	10.71%	10.71%	10.15%	9.83%
2005	392.3- Vehicles Transmission	-	-	-	-	NA	NA	13.07%	12.72%	12.72%	12.72%	12.72%	10.71%	10.71%	10.15%
2006	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	13.07%	12.72%	12.72%	12.72%	12.72%	10.71%	10.71%
2007	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	13.07%	12.72%	12.72%	12.72%	12.72%	12.72%
2008	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	NA	13.07%	12.72%	12.72%	12.72%	12.72%
2009	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	NA	NA	13.07%	12.72%	12.72%	12.72%
2010	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	13.07%	12.72%	12.72%
2011	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	13.07%	12.72%
2012	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.07%
2013	392.3- Vehicles Transmission	105,435	6,480	-	6,480	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
2014	392.3- Vehicles Transmission	-	-	-	-	NA	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
2015	392.3- Vehicles Transmission	-	-	-	-	NA	NA	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
2016	392.3- Vehicles Transmission	-	-	-	-	NA	NA	NA	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%	6.15%
2017	392.3- Vehicles Transmission	230,322	14,050	-	14,050	6.10%	6.10%	6.10%	6.10%	6.11%	6.11%	6.11%	6.11%	6.11%	6.11%
2018	392.3- Vehicles Transmission	47,056	2,812	-	2,812	5.98%	6.08%	6.08%	6.08%	6.08%	6.10%	6.10%	6.10%	6.10%	6.10%
1992	393- Stores Equipment	621	-	-	-	0.00%									
1993	393- Stores Equipment	-	-	-	-	NA	0.00%								
1994	393- Stores Equipment	491	-	-	-	0.00%	0.00%	0.00%							
1995	393- Stores Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%						
1996	393- Stores Equipment	-	-	-	-	NA	NA	0.00%	0.00%	0.00%					
1997	393- Stores Equipment	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%				
1998	393- Stores Equipment	92,770	9,397	-	9,397	10.13%	10.13%	10.13%	10.13%	10.08%	10.08%	10.01%			
1999	393- Stores Equipment	-	-	-	-	NA	10.13%	10.13%	10.13%	10.13%	10.08%	10.08%	10.01%		
2000	393- Stores Equipment	24,692	5,300	-	5,300	21.46%	21.46%	12.51%	12.51%	12.51%	12.51%	12.46%	12.46%	12.39%	
2001	393- Stores Equipment	1,245	-	-	-	0.00%	20.43%	20.43%	12.38%	12.38%	12.38%	12.38%	12.33%	12.33%	12.27%
2002	393- Stores Equipment	-	-	-	-	NA	0.00%	20.43%	20.43%	12.38%	12.38%	12.38%	12.38%	12.33%	12.33%
2003	393- Stores Equipment	-	-	-	-	NA	NA	0.00%	20.43%	20.43%	12.38%	12.38%	12.38%	12.38%	12.33%
2004	393- Stores Equipment	-	-	-	-	NA	NA	NA	0.00%	20.43%	20.43%	12.38%	12.38%	12.38%	12.36%
2005	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	0.00%	20.43%	20.43%	12.38%	12.38%	12.38%
2006	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	0.00%	20.43%	20.43%	12.38%	12.38%
2007	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%	20.43%	20.43%	12.38%
2008	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%	20.43%	20.43%
2009	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	0.00%	20.43%
2010	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00%
2011	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2012	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
2013	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2014	393- Stores Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	393- Stores Equipment	10,902	1,500	422	1,078	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%
2016	393- Stores Equipment	-	-	-	-	NA	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%
2017	393- Stores Equipment	-	-	-	-	NA	NA	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%
2018	393- Stores Equipment	-	-	-	-	NA	NA	NA	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%	9.89%
1971	394- Tools	475	-	-	-	0.00%									
1972	394- Tools	-	-	-	-	NA	0.00%								
1973	394- Tools	-	-	-	-	NA	NA	0.00%							
1974	394- Tools	-	-	-	-	NA	NA	NA	0.00%						
1975	394- Tools	-	-	-	-	NA	NA	NA	NA	0.00%					
1976	394- Tools	-	-	-	-	NA	NA	NA	NA	NA	0.00%				
1977	394- Tools	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%			
1978	394- Tools	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%		
1979	394- Tools	232	75	-	75	32.27%	32.27%	32.27%	32.27%	32.27%	32.27%	32.27%	32.27%	10.60%	
1980	394- Tools	-	-	-	-	NA	32.27%	32.27%	32.27%	32.27%	32.27%	32.27%	32.27%	32.27%	10.60%
1981	394- Tools	425	-	-	-	0.00%	0.00%	11.41%	11.41%	11.41%	11.41%	11.41%	11.41%	11.41%	11.41%
1982	394- Tools	-	-	-	-	NA	0.00%	0.00%	11.41%	11.41%	11.41%	11.41%	11.41%	11.41%	11.41%
1983	394- Tools	3,735	-	-	-	0.00%	0.00%	0.00%	0.00%	1.71%	1.71%	1.71%	1.71%	1.71%	1.71%
1984	394- Tools	1,809	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	1.21%	1.21%	1.21%	1.21%	1.21%
1985	394- Tools	2,334	597	-	597	25.56%	14.40%	7.57%	7.57%	7.19%	7.19%	7.87%	7.87%	7.87%	7.87%
1986	394- Tools	239	-	-	-	0.00%	23.19%	13.62%	7.35%	7.35%	6.99%	6.99%	7.65%	7.65%	7.65%
1987	394- Tools	568	-	-	-	0.00%	0.00%	18.99%	12.05%	6.87%	6.87%	6.55%	6.55%	7.19%	7.19%
1988	394- Tools	3,788	-	-	-	0.00%	0.00%	0.00%	8.61%	6.83%	4.78%	4.78%	4.63%	4.63%	5.12%
1989	394- Tools	577	-	-	-	0.00%	0.00%	0.00%	0.00%	7.95%	6.41%	4.57%	4.57%	4.43%	4.43%
1990	394- Tools	446	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	7.50%	6.11%	4.42%	4.42%	4.29%
1991	394- Tools	29,508	1,041	-	1,041	3.53%	3.48%	3.41%	3.03%	2.98%	2.96%	4.37%	4.17%	3.81%	3.81%
1992	394- Tools	18,408	4,000	-	4,000	21.73%	10.52%	10.42%	10.30%	9.56%	9.46%	9.42%	10.09%	9.77%	9.18%
1993	394- Tools	6,085	-	-	-	0.00%	16.33%	9.34%	9.26%	9.16%	8.57%	8.49%	8.46%	9.10%	8.84%
1994	394- Tools	27,018	-	-	-	0.00%	0.00%	7.77%	6.22%	6.19%	6.14%	5.87%	5.83%	5.82%	6.34%
1995	394- Tools	3,774	840	-	840	22.26%	2.73%	2.28%	8.76%	6.94%	6.90%	6.85%	6.56%	6.52%	6.50%
1996	394- Tools	1,224	-	-	-	0.00%	16.81%	2.62%	2.20%	8.57%	6.84%	6.80%	6.76%	6.47%	6.43%
1997	394- Tools	513	-	-	-	0.00%	0.00%	15.24%	2.58%	2.18%	8.49%	6.80%	6.76%	6.72%	6.44%
1998	394- Tools	80,060	8,716	-	8,716	10.89%	10.82%	10.66%	11.17%	8.49%	8.05%	9.89%	8.76%	8.74%	8.71%
1999	394- Tools	4,340	-	-	-	0.00%	10.33%	10.27%	10.12%	10.63%	8.17%	7.77%	9.59%	8.54%	8.52%
2000	394- Tools	8,063	5	-	5	0.06%	0.04%	9.43%	9.38%	9.26%	9.76%	7.65%	7.29%	9.07%	8.16%
2001	394- Tools	31,571	-	-	-	0.00%	0.01%	0.01%	7.03%	7.00%	6.93%	7.38%	6.11%	5.88%	7.49%
2002	394- Tools	-	-	-	-	NA	0.00%	0.01%	0.01%	7.03%	7.00%	6.93%	7.38%	6.11%	5.88%
2003	394- Tools	537	-	-	-	0.00%	0.00%	0.00%	0.01%	0.01%	7.00%	6.97%	6.90%	7.35%	6.09%
2004	394- Tools	-	-	-	-	NA	0.00%	0.00%	0.00%	0.01%	0.01%	7.00%	6.97%	6.90%	7.35%
2005	394- Tools	1,299	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	6.93%	6.90%	6.83%
2006	394- Tools	3,357	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	6.75%	6.72%
2007	394- Tools	7,646	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	6.37%
2008	394- Tools	625	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%
2009	394- Tools	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
2010	394- Tools	753	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2011	394- Tools	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2012	394- Tools	16,385	1,218	-	1,218	7.43%	7.43%	7.11%	7.11%	6.86%	4.79%	4.23%	4.05%	4.05%	3.98%
2013	394- Tools	4,860	-	29	(29)	-0.59%	5.60%	5.60%	5.41%	5.41%	5.26%	3.93%	3.54%	3.41%	3.41%
2014	394- Tools	893	-	-	-	0.00%	-0.50%	5.37%	5.37%	5.20%	5.20%	5.06%	3.82%	3.45%	3.32%
2015	394- Tools	5,011	-	-	-	0.00%	0.00%	-0.27%	4.38%	4.38%	4.26%	4.26%	4.17%	3.29%	3.01%
2016	394- Tools	8,832	530	-	530	6.00%	3.83%	3.60%	2.56%	4.78%	4.78%	4.68%	4.68%	4.60%	3.82%
2017	394- Tools	1,036	-	-	-	0.00%	5.37%	3.56%	3.36%	2.43%	4.64%	4.64%	4.55%	4.55%	4.48%
2018	394- Tools	6,700	3,784	-	3,784	56.48%	48.92%	26.04%	19.99%	19.20%	15.68%	12.59%	12.59%	12.38%	12.38%
1974	395- Lab Equipment	252	-	-	-	0.00%									
1975	395- Lab Equipment	-	-	-	-	NA	0.00%								
1976	395- Lab Equipment	-	-	-	-	NA	NA	0.00%							
1977	395- Lab Equipment	-	-	-	-	NA	NA	NA	0.00%						
1978	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	0.00%					
1979	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	NA	0.00%				
1980	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%			
1981	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%		
1982	395- Lab Equipment	675	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
1983	395- Lab Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1984	395- Lab Equipment	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1985	395- Lab Equipment	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1986	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1987	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1988	395- Lab Equipment	694	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1989	395- Lab Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1990	395- Lab Equipment	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1991	395- Lab Equipment	-	-	-	-	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1992	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1993	395- Lab Equipment	14,116	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1994	395- Lab Equipment	17,089	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1995	395- Lab Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1996	395- Lab Equipment	646	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1997	395- Lab Equipment	2,817	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
1998	395- Lab Equipment	138,121	45,797	-	45,797	33.16%	32.49%	32.35%	32.35%	28.86%	26.50%	26.50%	26.50%	26.50%	26.50%
1999	395- Lab Equipment	132,253	-	-	-	0.00%	16.94%	16.76%	16.72%	16.72%	15.74%	15.01%	15.01%	15.01%	15.01%
2000	395- Lab Equipment	-	-	-	-	NA	0.00%	16.94%	16.76%	16.72%	16.72%	15.74%	15.01%	15.01%	15.01%
2001	395- Lab Equipment	20,237	-	-	-	0.00%	0.00%	0.00%	15.76%	15.61%	15.57%	15.57%	14.72%	14.08%	14.08%
2002	395- Lab Equipment	1,015	-	-	-	0.00%	0.00%	0.00%	0.00%	15.70%	15.55%	15.52%	15.52%	14.67%	14.04%
2003	395- Lab Equipment	(7,912)	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	16.14%	15.98%	15.95%	15.95%	15.05%
2004	395- Lab Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	16.14%	15.98%	15.95%	15.95%
2005	395- Lab Equipment	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	0.00%	0.00%	16.14%	15.98%	15.95%
2006	395- Lab Equipment	5,205	6,785	-	6,785	130.35%	130.35%	130.35%	-250.68%	-401.03%	36.59%	36.59%	4.50%	18.20%	18.02%
2007	395- Lab Equipment	-	-	-	-	NA	130.35%	130.35%	130.35%	-250.68%	-401.03%	36.59%	36.59%	4.50%	18.20%
2008	395- Lab Equipment	-	-	-	-	NA	NA	130.35%	130.35%	130.35%	-250.68%	-401.03%	36.59%	36.59%	4.50%
2009	395- Lab Equipment	-	-	-	-	NA	NA	NA	130.35%	130.35%	130.35%	-250.68%	-401.03%	36.59%	36.59%
2010	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	130.35%	130.35%	130.35%	-250.68%	-401.03%	36.59%
2011	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	NA	130.35%	130.35%	130.35%	-250.68%	-401.03%
2012	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	130.35%	130.35%	130.35%	-250.68%
2013	395- Lab Equipment	15,728	-	154	(154)	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	31.67%	31.67%	31.67%
2014	395- Lab Equipment	-	-	-	-	NA	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	31.67%	31.67%
2015	395- Lab Equipment	-	-	-	-	NA	NA	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	31.67%
2016	395- Lab Equipment	-	-	-	-	NA	NA	NA	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%
2017	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%
2018	395- Lab Equipment	-	-	-	-	NA	NA	NA	NA	NA	-0.98%	-0.98%	-0.98%	-0.98%	-0.98%
1980	396- Power Operated Equipment	37,557	46,765	-	46,765	124.52%									
1981	396- Power Operated Equipment	-	-	-	-	NA	124.52%								
1982	396- Power Operated Equipment	-	-	-	-	NA	NA	124.52%							
1983	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	124.52%						
1984	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	NA	124.52%					
1985	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	NA	NA	124.52%				
1986	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	124.52%			
1987	396- Power Operated Equipment	29,478	12,900	-	12,900	43.76%	43.76%	43.76%	43.76%	43.76%	43.76%	43.76%	89.01%		
1988	396- Power Operated Equipment	38,931	4,477	-	4,477	11.50%	25.40%	25.40%	25.40%	25.40%	25.40%	25.40%	25.40%	60.53%	
1989	396- Power Operated Equipment	6,017	25	-	25	0.41%	10.02%	23.38%	23.38%	23.38%	23.38%	23.38%	23.38%	23.38%	57.30%
1990	396- Power Operated Equipment	-	-	-	-	NA	0.41%	10.02%	23.38%	23.38%	23.38%	23.38%	23.38%	23.38%	23.38%
1991	396- Power Operated Equipment	44,939	5,220	-	5,220	11.62%	11.62%	10.29%	10.82%	18.95%	18.95%	18.95%	18.95%	18.95%	18.95%
1992	396- Power Operated Equipment	12,896	47	-	47	0.37%	9.11%	9.11%	8.29%	9.50%	17.14%	17.14%	17.14%	17.14%	17.14%
1993	396- Power Operated Equipment	-	-	-	-	NA	0.37%	9.11%	9.11%	8.29%	9.50%	17.14%	17.14%	17.14%	17.14%
1994	396- Power Operated Equipment	25,413	3,000	-	3,000	11.81%	11.81%	7.95%	9.93%	9.93%	9.29%	9.96%	16.28%	16.28%	16.28%
1995	396- Power Operated Equipment	-	-	-	-	NA	11.81%	11.81%	7.95%	9.93%	9.93%	9.29%	9.96%	16.28%	16.28%
1996	396- Power Operated Equipment	5,314	-	-	-	0.00%	0.00%	9.76%	9.76%	6.99%	9.33%	9.33%	8.77%	9.56%	15.75%
1997	396- Power Operated Equipment	124,795	16,500	-	16,500	13.22%	12.68%	12.68%	12.54%	12.54%	11.61%	11.61%	11.61%	11.30%	11.33%
1998	396- Power Operated Equipment	62,951	4,550	-	4,550	7.23%	11.21%	10.90%	10.90%	11.01%	11.01%	10.42%	10.61%	10.61%	10.39%
1999	396- Power Operated Equipment	-	-	-	-	NA	7.23%	11.21%	10.90%	10.90%	11.01%	11.01%	10.42%	10.61%	10.61%
2000	396- Power Operated Equipment	530	29	-	29	5.52%	5.52%	7.21%	11.20%	10.89%	10.89%	10.99%	10.99%	10.40%	10.60%
2001	396- Power Operated Equipment	388	-	-	-	0.00%	3.18%	3.18%	7.17%	11.17%	10.87%	10.87%	10.98%	10.98%	10.39%
2002	396- Power Operated Equipment	-	-	-	-	NA	0.00%	3.18%	3.18%	7.17%	11.17%	10.87%	10.87%	10.98%	10.98%
2003	396- Power Operated Equipment	7,084	4,982	-	4,982	70.33%	70.33%	66.67%	62.62%	62.62%	13.48%	13.31%	12.96%	12.96%	12.83%
2004	396- Power Operated Equipment	32,447	6,890	-	6,890	21.23%	30.03%	30.03%	29.74%	29.42%	29.42%	15.91%	14.44%	14.11%	14.11%
2005	396- Power Operated Equipment	11,613	4,400	-	4,400	37.89%	25.62%	31.82%	31.82%	31.58%	31.31%	31.31%	18.13%	15.58%	15.24%
2006	396- Power Operated Equipment	-	-	-	-	NA	37.89%	25.62%	31.82%	31.82%	31.58%	31.31%	31.31%	18.13%	15.58%
2007	396- Power Operated Equipment	-	-	-	-	NA	NA	37.89%	25.62%	31.82%	31.82%	31.58%	31.31%	31.31%	18.13%
2008	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	37.89%	25.62%	31.82%	31.82%	31.58%	31.31%	31.31%
2009	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	NA	37.89%	25.62%	31.82%	31.82%	31.58%	31.31%
2010	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	NA	NA	37.89%	25.62%	31.82%	31.82%	31.58%
2011	396- Power Operated Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	37.89%	25.62%	31.82%	31.82%
2012	396- Power Operated Equipment	7,192	535	-	535	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	26.24%	23.07%	28.81%
2013	396- Power Operated Equipment	-	-	-	-	NA	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	26.24%	23.07%
2014	396- Power Operated Equipment	135,421	9,500	-	9,500	7.02%	7.02%	7.04%	7.04%	7.04%	7.04%	7.04%	7.04%	7.04%	9.36%
2015	396- Power Operated Equipment	14,401	-	-	-	0.00%	6.34%	6.34%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%
2016	396- Power Operated Equipment	-	-	-	-	NA	0.00%	6.34%	6.34%	6.39%	6.39%	6.39%	6.39%	6.39%	6.39%
2017	396- Power Operated Equipment	26,748	200	-	200	0.75%	0.75%	0.49%	5.49%	5.49%	5.57%	5.57%	5.57%	5.57%	5.57%
2018	396- Power Operated Equipment	729	-	-	-	0.00%	0.73%	0.73%	0.48%	5.47%	5.47%	5.55%	5.55%	5.55%	5.55%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1975	397- Communication Equipment	71	-	-	-	0.00%									
1976	397- Communication Equipment	-	-	-	-	NA	0.00%								
1977	397- Communication Equipment	-	-	-	-	NA	NA	0.00%							
1978	397- Communication Equipment	-	-	-	-	NA	NA	NA	0.00%						
1979	397- Communication Equipment	-	-	-	-	NA	NA	NA	NA	0.00%					
1980	397- Communication Equipment	-	-	-	-	NA	NA	NA	NA	NA	0.00%				
1981	397- Communication Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	0.00%			
1982	397- Communication Equipment	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	0.00%		
1983	397- Communication Equipment	14,240	250	-	250	1.76%	1.76%	1.76%	1.76%	1.76%	1.76%	1.76%	1.76%	1.75%	
1984	397- Communication Equipment	3,170	-	-	-	0.00%	1.44%	1.44%	1.44%	1.44%	1.44%	1.44%	1.44%	1.44%	1.43%
1985	397- Communication Equipment	56,760	5,910	-	5,910	10.41%	9.86%	8.31%	8.31%	8.31%	8.31%	8.31%	8.31%	8.31%	8.31%
1986	397- Communication Equipment	4,629	-	-	-	0.00%	9.63%	9.16%	7.82%	7.82%	7.82%	7.82%	7.82%	7.82%	7.82%
1987	397- Communication Equipment	-	-	-	-	NA	0.00%	9.63%	9.16%	7.82%	7.82%	7.82%	7.82%	7.82%	7.82%
1988	397- Communication Equipment	2,626	-	-	-	0.00%	0.00%	0.00%	9.23%	8.80%	7.57%	7.57%	7.57%	7.57%	7.57%
1989	397- Communication Equipment	7,684	-	2,048	(2,048)	-26.66%	-19.87%	-19.87%	-13.71%	5.39%	5.16%	4.61%	4.61%	4.61%	4.61%
1990	397- Communication Equipment	11,575	-	262	(262)	-2.26%	-11.99%	-10.56%	-10.56%	-8.71%	4.32%	4.17%	3.82%	3.82%	3.82%
1991	397- Communication Equipment	-	-	-	-	NA	-2.26%	-11.99%	-10.56%	-10.56%	-8.71%	4.32%	4.17%	3.82%	3.82%
1992	397- Communication Equipment	1,313	-	-	-	0.00%	0.00%	-2.03%	-11.23%	-9.96%	-9.96%	-8.30%	4.26%	4.10%	3.78%
1993	397- Communication Equipment	5,719	-	-	-	0.00%	0.00%	0.00%	-1.41%	-8.79%	-7.99%	-7.99%	-6.89%	3.99%	3.85%
1994	397- Communication Equipment	227,774	-	664	(664)	-0.29%	-0.28%	-0.28%	-0.28%	-0.38%	-1.17%	-1.16%	-1.16%	-1.14%	0.92%
1995	397- Communication Equipment	-	-	-	-	NA	-0.29%	-0.28%	-0.28%	-0.28%	-0.38%	-1.17%	-1.16%	-1.16%	-1.14%
1996	397- Communication Equipment	3,443	-	-	-	0.00%	0.00%	-0.29%	-0.28%	-0.28%	-0.28%	-0.37%	-1.16%	-1.14%	-1.14%
1997	397- Communication Equipment	-	-	-	-	NA	0.00%	0.00%	-0.29%	-0.28%	-0.28%	-0.28%	-0.37%	-1.16%	-1.14%
1998	397- Communication Equipment	784,830	39,493	-	39,493	5.03%	5.03%	5.01%	5.01%	3.82%	3.80%	3.80%	3.80%	3.73%	3.50%
1999	397- Communication Equipment	1,129	-	-	-	0.00%	5.02%	5.02%	5.00%	5.00%	3.82%	3.80%	3.79%	3.79%	3.72%
2000	397- Communication Equipment	56,972	4,101	-	4,101	7.20%	7.06%	5.17%	5.17%	5.15%	5.15%	4.00%	3.98%	3.97%	3.97%
2001	397- Communication Equipment	32,765	-	-	-	0.00%	4.57%	4.51%	4.98%	4.98%	4.96%	4.96%	3.88%	3.86%	3.85%
2002	397- Communication Equipment	2,933	2,179	-	2,179	74.31%	6.10%	6.78%	6.70%	5.21%	5.21%	5.19%	5.19%	4.06%	4.04%
2003	397- Communication Equipment	-	-	-	-	NA	74.31%	6.10%	6.78%	6.70%	5.21%	5.21%	5.19%	5.19%	4.06%
2004	397- Communication Equipment	-	-	-	-	NA	NA	74.31%	6.10%	6.78%	6.70%	5.21%	5.21%	5.19%	5.19%
2005	397- Communication Equipment	26,936	-	-	-	0.00%	0.00%	0.00%	7.30%	3.48%	5.25%	5.20%	5.05%	5.05%	5.04%
2006	397- Communication Equipment	57,985	-	10,300	(10,300)	-17.76%	-12.13%	-12.13%	-12.13%	-9.24%	-6.73%	-2.26%	-2.25%	3.68%	3.68%
2007	397- Communication Equipment	50,509	-	-	-	0.00%	-9.49%	-7.61%	-7.61%	-7.61%	-5.87%	-4.75%	-1.76%	-1.75%	3.50%
2008	397- Communication Equipment	-	-	-	-	NA	0.00%	-9.49%	-7.61%	-7.61%	-7.61%	-5.87%	-4.75%	-1.76%	-1.75%
2009	397- Communication Equipment	-	-	-	-	NA	NA	0.00%	-9.49%	-7.61%	-7.61%	-7.61%	-5.87%	-4.75%	-1.76%
2010	397- Communication Equipment	-	-	-	-	NA	NA	NA	0.00%	-9.49%	-7.61%	-7.61%	-7.61%	-5.87%	-4.75%
2011	397- Communication Equipment	215,263	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	-3.18%	-2.94%	-2.94%	-2.94%	-2.30%
2012	397- Communication Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	-3.18%	-2.94%	-2.94%	-2.94%
2013	397- Communication Equipment	686,007	-	6,738	(6,738)	-0.98%	-0.98%	-0.75%	-0.75%	-0.75%	-0.75%	-0.71%	-1.69%	-1.64%	-1.64%
2014	397- Communication Equipment	-	-	-	-	NA	-0.98%	-0.98%	-0.75%	-0.75%	-0.75%	-0.75%	-0.71%	-1.69%	-1.64%
2015	397- Communication Equipment	-	-	-	-	NA	NA	-0.98%	-0.98%	-0.75%	-0.75%	-0.75%	-0.75%	-0.71%	-1.69%
2016	397- Communication Equipment	35,640	-	-	-	0.00%	0.00%	0.00%	-0.93%	-0.93%	-0.72%	-0.72%	-0.72%	-0.72%	-0.68%
2017	397- Communication Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	-0.93%	-0.93%	-0.72%	-0.72%	-0.72%	-0.72%
2018	397- Communication Equipment	-	-	-	-	NA	NA	0.00%	0.00%	0.00%	-0.93%	-0.93%	-0.72%	-0.72%	-0.72%
1974	398- Misc. Equipment	2,056	-	-	-	0.00%									
1975	398- Misc. Equipment	-	-	-	-	NA	0.00%								
1976	398- Misc. Equipment	232	-	-	-	0.00%	0.00%	0.00%							
1977	398- Misc. Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%						
1978	398- Misc. Equipment	-	-	-	-	NA	NA	0.00%	0.00%	0.00%					
1979	398- Misc. Equipment	1,619	725	-	725	44.79%	44.79%	44.79%	39.18%	39.18%	18.56%				
1980	398- Misc. Equipment	-	-	-	-	NA	44.79%	44.79%	44.79%	39.18%	39.18%	18.56%			
1981	398- Misc. Equipment	3,120	108	-	108	3.45%	3.45%	17.57%	17.57%	17.57%	16.75%	16.75%	11.85%		
1982	398- Misc. Equipment	358	20	-	20	5.59%	3.67%	3.67%	16.73%	16.73%	16.73%	16.00%	16.00%	11.55%	
1983	398- Misc. Equipment	10,640	451	-	451	4.24%	4.28%	4.10%	4.10%	8.28%	8.28%	8.28%	8.16%	8.16%	7.23%
1984	398- Misc. Equipment	-	-	-	-	NA	4.24%	4.28%	4.10%	4.10%	8.28%	8.28%	8.28%	8.16%	8.16%
1985	398- Misc. Equipment	27,811	5,096	-	5,096	18.32%	18.32%	14.43%	14.35%	13.53%	13.53%	14.70%	14.70%	14.70%	14.62%
1986	398- Misc. Equipment	10,942	454	-	454	4.15%	14.32%	14.32%	12.15%	12.10%	11.59%	11.59%	12.58%	12.58%	12.58%
1987	398- Misc. Equipment	7,871	190	-	190	2.42%	3.43%	12.31%	12.31%	10.81%	10.78%	10.40%	10.40%	11.30%	11.30%
1988	398- Misc. Equipment	6,016	114	-	114	1.90%	2.19%	3.06%	11.12%	11.12%	9.96%	9.94%	9.64%	9.64%	10.47%
1989	398- Misc. Equipment	9,363	17	-	17	0.18%	0.85%	1.38%	2.27%	9.47%	9.47%	8.70%	8.69%	8.47%	8.47%
1990	398- Misc. Equipment	936	-	-	-	0.00%	0.17%	0.81%	1.33%	2.21%	9.33%	9.33%	8.59%	8.58%	8.37%
1991	398- Misc. Equipment	365	-	-	-	0.00%	0.00%	0.16%	0.79%	1.31%	2.19%	9.28%	9.28%	8.55%	8.54%
1992	398- Misc. Equipment	210	-	-	-	0.00%	0.00%	0.00%	0.16%	0.78%	1.30%	2.17%	9.25%	9.25%	8.53%
1993	398- Misc. Equipment	7,490	122	-	122	1.62%	1.58%	1.51%	1.35%	0.76%	1.04%	1.38%	2.08%	8.44%	8.44%
1994	398- Misc. Equipment	7,987	-	-	-	0.00%	0.79%	0.78%	0.76%	0.72%	0.53%	0.78%	1.10%	1.75%	7.59%
1995	398- Misc. Equipment	1,267	-	-	-	0.00%	0.00%	0.73%	0.72%	0.70%	0.67%	0.50%	0.75%	1.07%	1.71%
1996	398- Misc. Equipment	2,505	335	-	335	13.37%	8.88%	2.85%	2.37%	2.35%	2.30%	2.20%	1.57%	1.63%	1.77%
1997	398- Misc. Equipment	702	-	-	-	0.00%	10.45%	7.49%	2.69%	2.29%	2.27%	2.23%	2.13%	1.54%	1.60%

Big Rivers
Retirements, Gross Salvage, and Cost of Removal
As Adjusted

Transaction Year	Description	Retirements	Gross Salvage	Cost of Removal	Net Salvage	Net Salv. %	2- yr Net Salv. %	3- yr Net Salv. %	4- yr Net Salv. %	5- yr Net Salv. %	6- yr Net Salv. %	7- yr Net Salv. %	8- yr Net Salv. %	9- yr Net Salv. %	10- yr Net Salv. %
1998	398- Misc. Equipment	126,675	14,485	-	14,485	11.43%	11.37%	11.41%	11.30%	10.65%	10.19%	10.18%	10.15%	10.09%	9.50%
1999	398- Misc. Equipment	8,320	917	-	917	11.02%	11.41%	11.35%	11.39%	11.28%	10.67%	10.24%	10.22%	10.20%	10.14%
2000	398- Misc. Equipment	11,097	77	-	77	0.69%	5.12%	10.60%	10.54%	10.59%	10.50%	9.97%	9.60%	9.59%	9.56%
2001	398- Misc. Equipment	6,176	-	-	-	0.00%	0.45%	3.88%	10.17%	10.12%	10.17%	10.09%	9.60%	9.25%	9.24%
2002	398- Misc. Equipment	-	-	-	-	NA	0.00%	0.45%	3.88%	10.17%	10.12%	10.17%	10.09%	9.60%	9.25%
2003	398- Misc. Equipment	1,951	-	-	-	0.00%	0.00%	0.00%	0.40%	3.61%	10.04%	9.99%	10.05%	9.97%	9.49%
2004	398- Misc. Equipment	641	-	-	-	0.00%	0.00%	0.00%	0.00%	0.39%	3.53%	10.00%	9.95%	10.00%	9.93%
2005	398- Misc. Equipment	633	-	171	(171)	-27.03%	-13.42%	-5.30%	-5.30%	-1.82%	-0.46%	2.85%	9.84%	9.80%	9.86%
2006	398- Misc. Equipment	3,136	-	-	-	0.00%	-4.54%	-3.88%	-2.69%	-2.69%	-1.36%	-0.40%	2.57%	9.65%	9.61%
2007	398- Misc. Equipment	1,195	-	-	-	0.00%	0.00%	-3.45%	-3.05%	-2.26%	-2.26%	-1.25%	-0.38%	2.48%	9.58%
2008	398- Misc. Equipment	1,577	-	-	-	0.00%	0.00%	0.00%	-2.61%	-2.38%	-1.87%	-1.87%	-1.12%	-0.36%	2.37%
2009	398- Misc. Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	-2.61%	-2.38%	-1.87%	-1.87%	-1.12%	-0.36%
2010	398- Misc. Equipment	713	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	-2.36%	-2.17%	-1.74%	-1.74%	-1.07%
2011	398- Misc. Equipment	-	-	-	-	NA	0.00%	0.00%	0.00%	0.00%	0.00%	-2.36%	-2.17%	-1.74%	-1.74%
2012	398- Misc. Equipment	583	43	-	43	7.43%	7.43%	3.34%	3.34%	1.51%	1.07%	0.60%	-1.63%	-1.51%	-1.22%
2013	398- Misc. Equipment	-	-	-	-	NA	7.43%	7.43%	3.34%	3.34%	1.51%	1.07%	0.60%	-1.63%	-1.51%
2014	398- Misc. Equipment	-	-	-	-	NA	NA	7.43%	7.43%	3.34%	3.34%	1.51%	1.07%	0.60%	-1.63%
2015	398- Misc. Equipment	-	-	-	-	NA	NA	NA	7.43%	7.43%	3.34%	3.34%	1.51%	1.07%	0.60%
2016	398- Misc. Equipment	1,829	-	-	-	0.00%	0.00%	0.00%	0.00%	1.80%	1.80%	1.39%	1.39%	0.92%	0.73%
2017	398- Misc. Equipment	15,783	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.24%	0.24%	0.23%	0.23%	0.21%
2018	398- Misc. Equipment	19,221	-	1,366	(1,366)	-7.11%	-3.90%	-3.71%	-3.71%	-3.71%	-3.71%	-3.53%	-3.53%	-3.47%	-3.47%

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	)	**Case No. 2020-00_____**
EXPENSES, ESTABLISH REGULATORY ASSETS,	)	
AMORTIZE REGULATORY ASSETS, AND	)	
OTHER APPROPRIATE RELIEF	)	

DIRECT TESTIMONY

OF

ROBERT W. BERRY
PRESIDENT AND CHIEF EXECUTIVE OFFICER

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

FILED: **February 28, 2020**

Application Exhibit D
Direct Testimony of Robert W. Berry

DIRECT TESTIMONY

OF

ROBERT W. BERRY

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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. I have held this position since July 1, 2014.

Q. What is your experience in the electric utility industry prior to assuming the position of President and Chief Executive Officer for Big Rivers?

A. Previously, I was Big Rivers' Chief Operating Officer beginning February 2013. Before that, I served as Big Rivers' Vice President of Production from the closing of the transaction that unwound Big Rivers' 1998 lease with E.ON U.S., LLC and its affiliates (the "Unwind Transaction"), described in Case No. 2007-00455. Before the closing of the Unwind Transaction, I was employed by Western Kentucky Energy Corporation ("WKE") for 11 years beginning as a Maintenance Manager in 1998. I held the position of Plant Manager at the Coleman Generating Station from 2000 until 2003, at which time I became the

Plant Manager of the Sebree Generating Station. Altogether, I have over 38 years of experience in this system, having worked for both Big Rivers and WKE since 1981. A copy of my professional summary is attached hereto as Exhibit Berry-1.

Q. Have you previously testified before the Kentucky Public Service Commission ("Commission")?

A. Yes. I testified on behalf of Big Rivers in Case No. 2019-00269[1] in which Big Rivers requested that the Commission enforce the series of contracts between Big Rivers and the City of Henderson and the City of Henderson Utility Commission (collectively, "HMP&L") related to the William L. Newman Station ("Station Two") generating plant and associated facilities, and in Case No. 2018-00146,[2] in which the Commission found, among other things, that various Station Two contracts had terminated. Most recently, I submitted testimony in support of the Joint Application filed by Big Rivers and Meade County Rural Electric Cooperative Corporation in Case No. 2019-00365,[3] which is presently pending before the Commission and involves a request for

[1] *In the Matter of: Application of Big Rivers Electric Corporation for Enforcement of Rate and Service Standards* (filed July 31, 2019).

[2] *In the Matter of: Notice of Termination of Contracts and Application of Big Rivers Electric Corporation for a Declaratory Order and for Authority to Establish a Regulatory Asset* (Ky. P.S.C. Aug. 29, 2018).

[3] *In the Matter of: Electronic Joint Application of Big Rivers Electric Corporation and Meade County Rural Electric Cooperative Corporation for (1) Approval of Contracts for Electric Service with Nucor Corporation; and (2) Approval of Tariff* (filed Sept. 26, 2019).

approval of contracts to provide electric service to a facility to be developed by Nucor Corporation ("Nucor") in Brandenburg, Meade County, Kentucky. I have also testified on behalf of Big Rivers in the Unwind Transaction case (Case No. 2007-00455), in two cases seeking approval of contracts relating to the two smelters owned by subsidiaries of Century Aluminum Company (Case Nos. 2013-00221 and 2013-00413), in Big Rivers' last two general rate cases (Case Nos. 2012-00535 and 2013-00199), and in its 2012 Environmental Compliance Plan case (Case No. 2012-00063).

Q. What is the purpose of your testimony in this proceeding?

A. The overarching purpose of my testimony is to provide the historical and ongoing factual context that supports the relief Big Rivers seeks in this application. For years, Big Rivers has worked on behalf of its Members[4] to mitigate the uncertainty and difficulties surrounding the provision of service to and eventual departure of two large aluminum smelters located within Big Rivers' service territory. With this filing, we are poised to close that difficult chapter of Big Rivers' history by returning the benefits of that hard work to our Members. This will be accomplished through a "New TIER Credit" and a proposed revision to our Member Rate Stability Mechanism ("MRSM") Rider

[4] Big Rivers' Member-Owners are: Jackson Purchase Energy Corporation ("JPEC"), Kenergy Corp. ("Kenergy"), and Meade County Rural Electric Cooperative Corporation ("MCRECC") (collectively, the "Members" or "Member-Owners").

that will provide both short- and long-term financial benefits to our Members and reconfirm the Commission's constructive regulatory support which is key to recovery of Big Rivers' investment grade credit ratings from the three major credit rating agencies.

Within the scope of that broad purpose, I will provide an overview of Big Rivers' current generation portfolio and strategic profile, as well as an overview of the factors that led to Big Rivers' decision to retire its Coleman Station and Reid Station Unit 1, subject to the approvals required to create regulatory assets for the expenses Big Rivers will incur as a result of the retirements. I will also describe the importance of the relief requested in this proceeding and lay the groundwork for the specific accounting, tariff, Member bill impact, and anticipated credit rating impact that Paul G. Smith discusses in his testimony.

Q. Are you sponsoring any exhibits?

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

- Exhibit Berry-1: Professional Summary
- Exhibit Berry-2: January 28, 2019 RUS Corrective Plan
- Exhibit Berry-3: Fitch's December 4, 2019 Press Release
- Exhibit Berry-4: Moody's November 13, 2019 Credit Opinion
- Exhibit Berry-5: S&P January 16, 2019 Credit Opinion
- Exhibit Berry-6: Calculation of Big Rivers' Minimum Equity Requirement

II. BACKGROUND

Q. Please briefly describe Big Rivers' generation portfolio.

A. Big Rivers' generation portfolio has consisted predominately of coal-fired assets at three locations: the D.B. Wilson Station ("Wilson Station") located near Centertown, Kentucky; the Kenneth C. Coleman Station ("Coleman Station") near Hawesville, Kentucky; and the Sebree Station in Sebree, Kentucky, which includes the Robert D. Green Station ("Green Station"), the Robert A. Reid Station ("Reid Station"), and Station Two. Certain of these assets on which Big Rivers formerly relied are not presently operating due to environmental regulation, decreased load, uneconomic power market prices and other factors. Specifically, the Coleman Station has been idled since 2014; the Reid Station's coal-fired unit has been idled since 2016; and the Station Two units were retired effective February 1, 2019.

Q. Has the native load served by Big Rivers changed in recent years?

A. Yes; significantly. As the Commission is aware, in 2013 one of two large smelter customers left Big Rivers' system. In 2014, the second smelter exited Big Rivers' system. The combined load of the two smelters prior to departure was approximately 850 MW, representing more than half of Big Rivers' total native load. Losing load of that magnitude imposed obvious and significant impacts on revenues and operations. Since the exit of the smelters, Big Rivers'

native load has grown modestly and presently stands at approximately 660 MWs.

Q. Please explain how Big Rivers has addressed its excess generation capacity since the exit of the smelters' load in 2013-2014.

A. Even before the smelters left the system, Big Rivers was examining and implementing strategies for mitigating the negative impacts of a significant decrease in load. These strategies were set forth in a Load Concentration Analysis and Mitigation Plan ("Load Mitigation Plan") developed by Big Rivers and included, among other things, seeking rate increases; marketing excess power on short-term, mid-term, and long-term bases when market prices were favorable; evaluating bilateral sales agreements and wholesale power contracts; expanding existing load on Big Rivers' system; attracting new industrial load to Big Rivers' service territory; and reducing costs and optimizing existing assets.

Q. Please detail how the Load Mitigation Plan has developed in the years since the loss of the smelter loads.

A. The Load Mitigation Plan has evolved into a Business Plan, which is a dynamic process strategically leveraging Big Rivers' assets to achieve its mission to safely deliver competitive and reliable wholesale power and cost-effective shared services desired by its Member-Owners. Consistent with its Business

Plan, Big Rivers continues to expand power marketing efforts across the Commonwealth and the Midwest, securing short-term and long-term contracts for its excess energy. Also as a result of Big Rivers' Business Plan, Big Rivers has been successfully selling economic energy within the markets maintained by The Midcontinent Independent System Operator, Inc. ("MISO").

Q. Please describe Big Rivers' efforts with respect to off-system sales growth.

A. After ensuring the satisfaction of its native load, Big Rivers capitalizes on its available capacity in a number of ways. For instance, Big Rivers has successfully received Commission approval to execute wholesale full-requirements purchased power contracts with entities in the State of Nebraska through 2026. Big Rivers has negotiated an agreement to satisfy the full capacity and energy requirements of Owensboro Municipal Utilities ("OMU") through 2026. Big Rivers also provides dispatchable power to nine communities which are members of the Kentucky Municipal Energy Agency ("KyMEA") into 2029.

Q. Has Big Rivers also worked to increase its native load?

A. Yes. Among other things, Big Rivers has developed and implemented an economic development rate ("EDR") to encourage manufacturers and similar load centers to locate and operate in the Western Kentucky region. The first

EDR contracts involved a planned approximately $350 million expansion of production facilities by Aleris Rolled Products Manufacturing, Inc. in Kenergy's service territory.[5] In addition, presently pending before the Commission in Case No. 2019-00365 is a request for approval of contracts to provide electric service to Nucor's new facility in Brandenburg, Meade County, Kentucky. Nucor's planned $1.35 billion steel plate mill is expected to result in 400 direct jobs, over 2,600 indirect jobs, $189 million in annual labor income, $14.3 million in annual state and local tax revenues, and approximately $360 million in annual gross domestic product once fully operational. The facility is expected to increase Big Rivers' native load by [redacted].

Q. What are some other recent steps Big Rivers has taken to address the impacts to its system that resulted from the loss of the smelter load?

A. While Big Rivers has certainly attempted to replace the revenue lost with the departure of the smelter load, it has also coupled those efforts with significant cost-saving measures, and an economic review of its generation portfolio to identify strategic supply-side actions. Such cost-saving measures include the difficult but necessary reduction of its workforce from over 600 employees to

[5] *See* Case No. 2016-00117, *In the Matter of: Joint Application of Kenergy Corp. and Big Rivers Electric Corporation for Approval of Contracts* (Ky. P.S.C. June 30, 2016).

less than 400 employees today. In Case No. 2018-00146,[6] Big Rivers also sought and obtained a declaratory order from the Commission ratifying Big Rivers' determination that the HMP&L Station Two units were no longer capable of producing economically-competitive generation, thus confirming Big Rivers' exit from that costly arrangement (though Big Rivers maintains certain obligations under the parties' Joint Facilities Agreement).

Q. Have these efforts and others improved Big Rivers' financial performance in recent years?

A. Yes, Big Rivers' financial metrics have improved significantly in recent years. The following table illustrates the positive trend for several key financial metrics:

Metric	2016	2017	2018	2019*
Net Margins	$12.9	$13.0	$15.2	$16.7
TIER	1.31	1.32	1.39	1.45
Debt Service	1.23	1.22	1.22	1.60
FFO/Debt	2.2%	4.0%	5.2%	9.0%
Leverage Ratio	10.3	9.8	9.2	6.7

*Unaudited

[6] *In the Matter of: Notice of Termination of Contracts and Application of Big Rivers Electric Corporation for a Declaratory Order and for Authority to Establish a Regulatory Asset* (Ky. P.S.C. Aug. 29, 2018).

Q. Has Big Rivers completed its pursuit of a full financial recovery from the loss of the smelters' load in 2013-2014?

A. Not yet. Big Rivers has regained an investment grade rating with one of the three rating agencies, but it continues to aggressively seek that same upgrade from the other two agencies. The relief requested in this proceeding is key to that strategy. Specifically, a Commission order granting the relief requested here would demonstrate constructive regulatory support of the utility and its management and operational strategies, considerations that have been identified as critical to regaining an investment grade credit rating from all three rating agencies.

Q. Why is Big Rivers requesting expedited treatment of this matter?

A. Big Rivers is requesting that the Commission issue an order no later than June 30, 2020 because Big Rivers has an opportunity to realize financial savings if it regains its investment grade credit ratings from at least two major credit rating agencies prior to issuing new debt, which Big Rivers plans to do as early as July 2020. In order to ensure a reasonable chance at regaining unanimous investment grade credit ratings, and realizing the financial benefits of such ratings in time for the issuance of the new debt, we believe that any such order in this proceeding would need to be received by June 30 in order to allow sufficient time for the credit rating agencies to complete their internal review and analysis, and to issue a potential upgrade prior to the debt issuance. We recognize the difficulties imposed by that time constraint, and thus we have

worked diligently not only to develop and file this application, but also to develop what we believe is significant consensus with principal stakeholders including our Members, the Office of Rate Intervention for the Attorney General of Kentucky (the "Attorney General"), and Kentucky Industrial Utility Customers, Inc. ("KIUC").

Q. Did Big Rivers communicate with its Members during the planning and development of this proceeding?

A. Yes. In addition to normal day-to-day discussions between the employees of Big Rivers and its Members, Big Rivers' Board consists of representatives of its Members, and thus updated information regularly flows to JPEC, Kenergy, and MRECC. Big Rivers' Board unanimously approved Big Rivers' pursuit of the relief requested in this proceeding. Big Rivers also provided notice of the proposed revisions to the MRSM Rider to its Members, as evidenced by copies of the relevant notice provided herewith as Exhibit A to Big Rivers' Application.

Q. Did Big Rivers communicate with the Attorney General and KIUC during the planning and development of this proceeding?

A. Yes. In anticipation of requesting the relief sought in this proceeding, Big Rivers met with representatives of the Attorney General and KIUC to provide

an overview of Big Rivers' plans to seek relief that will result in both a stabilization of rates charged to its Members and the reestablishment of Big Rivers' investment grade credit rating from all three rating agencies. To that end, Big Rivers has also provided a courtesy copy of this application and supporting exhibits to both the Attorney General and counsel for KIUC.

Q. In the Settlement Agreement in Case No. 2018-00146, Big Rivers previously indicated that it would seek recovery of the Smelter Loss Mitigation Regulatory Assets[7] in a base rate proceeding. In the absence of a base rate proceeding, what filings could the Commission be expecting from Big Rivers?

A. Big Rivers believed it would file a base rate proceeding in mid-2020, to be effective January 1, 2021. As Big Rivers began work on that filing, it became apparent that it would not need to seek an increase of its base rates if it could secure approval to implement the relief sought here. Accordingly, this filing -- which will stabilize the base rates charged to Big Rivers' Members, while continuing to offer a monthly bill credit, and recover the Smelter Loss

[7] As explained in the Application and the Testimony of Paul G. Smith, the "Smelter Loss Mitigation Regulatory Assets" include the regulatory assets previously established for the Station Two Retirement Costs, Coleman Station Depreciation Deferral, and Wilson Station Depreciation Deferral; the Focused Management Audit Expenses incurred, and for which recovery is authorized by KRS 278.255(3); and the regulatory assets sought to be established in this proceeding for the unrecovered net book value and the decommissioning costs of the Coleman Station and Reid Station Unit 1, subject to approval of the same by the Rural Utilities Service ("RUS").

Mitigation Regulatory Assets -- takes the place of the anticipated base rate application.

III. REQUESTED RELIEF

A. THE COMMISSION SHOULD DECLARE THE WILSON STATION "USED AND USEFUL" TO SERVE BIG RIVERS' MEMBERS.

Q. Is Big Rivers currently recovering the depreciation expenses associated with the Wilson Station?

A. No. At the time Big Rivers filed its last rate case (Case No. 2013-00199) (the "2013 Rate Case"), Big Rivers expected to idle the Wilson Station to reduce Big Rivers' operating costs following loss of the smelter load. As a result, the Commission determined that the Wilson Station was no longer needed to serve the customers on Big Rivers' system, and constituted excess capacity.[8] Consequently, the Commission ordered that depreciation expenses associated with the Wilson Station be excluded from rate recovery, and that the depreciation expenses be recorded in a regulatory asset account.[9]

[8] *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 15.

[9] *Id.* at 15-16.

Q. Is the Wilson Station currently idled?

A. No. Big Rivers expected to idle Wilson Station following the loss of the smelter load, but the Wilson Station continued to operate to support the Load Mitigation Plan.

In fact, in the recent proceeding in which the Commission determined that the Station Two Contracts between Big Rivers and HMP&L had terminated, Big Rivers, the Attorney General, and KIUC entered into a Settlement Agreement confirming Wilson's ongoing value to Big Rivers and its Members. In the Commission-approved settlement in Case No. 2018-00146, the parties agreed that the Wilson Station was "used and useful" for the benefit of the Members. Specifically, the parties agreed:

> The Attorney General and KIUC acknowledge and agree: (i) that with the termination of the Terminated Contracts, Big Rivers' Wilson generating station is necessary to serve Big Rivers' Native System peak demand and energy needs, based on information provided in Big Rivers' latest IRP, Case No. 2017-00384; (ii) that although Big Rivers is not currently recovering depreciation for its Wilson station or the fixed costs it incurs to operate Wilson, Wilson has operated and provided benefits to Big Rivers' members by, among other things, reducing wholesale and retail fuel adjustment clause charges, and by enabling Big Rivers to secure new load to mitigate the loss of the smelter load; and (iii) that although Wilson was expected to be idled during the pendency of Case No. 2013-00199, it is needed to serve customers on the Big Rivers system.[10]

[10] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset,* Settlement Agreement, Ky. P.S.C. Case No. 2018-000146 (Oct. 22, 2019), at 8-9, ¶ 6.

Q. What is Big Rivers' proposal regarding Wilson Station depreciation expense?

A. With the approval of Wilson Station as a "used and useful" generating asset, Big Rivers is proposing to cease deferral of Wilson Station depreciation expense as of January 1, 2021, and to begin recognizing such depreciation as a current operating expense from that date forward. Further, as is discussed fully in the Testimony of Paul G. Smith, Big Rivers seeks to recover the established Wilson Station Depreciation Deferral regulatory asset through amortization.

Q. Will ceasing to defer the Wilson Station depreciation expense benefit Big Rivers' Members?

A. Yes. Ceasing to defer Wilson Station depreciation expense will avoid further increasing the regulatory asset balance from which Big Rivers would otherwise need to seek recovery from its Members in the future. Allowing Big Rivers to recognize the annual depreciation expense as a current operating cost will also signal to the credit ratings agencies the continued constructive regulatory environment in Kentucky, both of which the credit agencies have indicated could lead to an upgrade in Big Rivers' credit rating. Additionally, Wilson Station directly serves Big Rivers' current Members and their current retail customer-owners; therefore, it is used and useful, and depreciation expense on Wilson Station should be recoverable.

Moreover, as is explained below, if the Commission approves the proposed New TIER Credit, Big Rivers believes that its Members can anticipate an effective rate reduction in 2021, even after the Commission authorizes Big Rivers to recognize the Wilson Station depreciation expense as a current charge.

B. THE COMMISSION SHOULD ALLOW BIG RIVERS TO ESTABLISH REGULATORY ASSETS FOR THE REMAINING NET BOOK VALUE OF THE COLEMAN STATION AND REID STATION UNIT 1 AND OTHER COSTS ASSOCIATED WITH RETIRING THESE FACILITIES, SUCH AS DECOMMISSIONING.

Q. What led to Big Rivers' decision to retire the Coleman Station and Reid Station Unit 1?

A. Coleman Station and Reid Station Unit 1 have been idled for several years in part due to the excess generation capacity created by the loss of the smelter loads. Further, Reid Station Unit 1 is not in compliance with the Mercury and Air Toxics Standards ("MATS"), and the cost of bringing it into compliance with MATS would not have been economic given Big Rivers' load and costs projections, and weak pricing in the competitive market. During the period that the generating stations have been idled, energy and capacity prices in the competitive markets have continued to make their operation uneconomic. Additionally, the period for which these facilities have now been idled exceeds the period allowed by MISO, and the interconnection rights at both facilities have therefore been terminated. In sum, the combination of uneconomic

pricing and termination of interconnection rights essentially eliminates the financial viability of reenergizing either of these generating facilities.

Q. Why should the Commission allow Big Rivers to establish the regulatory assets associated with the retirement of the Coleman Station and Reid Station Unit 1, subject to the approval of RUS?

A. Big Rivers' need to establish (and recover) the regulatory assets sought in this proceeding must be viewed in the context of Big Rivers' recent history and its long-term plans for operating the cooperative. As the Commission knows, in 2009, Big Rivers and subsidiaries or affiliates of LG&E/KU implemented an early termination of a long-term lease of Big Rivers' generating facilities, and the related power purchase agreement by which Big Rivers obtained a fixed amount of power for its load requirements during the term of that lease. The termination transaction is generally referred to as the "Unwind" or "Unwind Transaction."[11]

One significant aspect of the Unwind was that Big Rivers would resume providing the wholesale power requirements for the two aluminum smelters that were retail customers of one of Big Rivers' Members. Because the smelters

[11] *See In the Matter of: The Applications of Big Rivers Electric Corporation for: (1) Approval of Wholesale Tariff Additions for Big Rivers Electric Corporation, (2) Approval of Transactions, (3) Approval to Issue Evidences of Indebtedness, and (4) Approval of Amendments to Contracts; and of E.On U.S., LLC, Western Kentucky Energy Corp., and LG&E Energy Marketing, Inc. for Approval of Transactions*, Ky. P.S.C. Case No. 2007-00455.

would represent approximately 850 MW of Big Rivers' total post-Unwind system load of approximately 1,500 MW, prior to the Unwind, Big Rivers took steps to prepare for the possibility that the smelters might cease operations. For example, Big Rivers built transmission system improvements, which were approved by the Commission,[12] and even convinced the General Assembly to amend a state statute to assure that Big Rivers would be in a position to export and sell the full amount of the smelter load if the smelters closed.[13]

The Unwind was approved by the Commission on March 6, 2009, and closed on July 16, 2009. By 2012, the smelters were threatening closure in the face of declining world aluminum market conditions. In response, Big Rivers developed and adopted the Load Mitigation Plan. The Load Mitigation Plan included, among other things, offsetting the loss of the smelter load and stabilizing Member rates by entering into long-term agreements to sell excess generation, expanding existing load, and reducing overall system operating expenses by laying-up or liquidating existing assets.

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[12] *See In the Matter of: Application of Big Rivers Electric Corporation for a Certificate of Public Convenience and Necessity to Construct a 161 kV Transmission Line in Ohio County, Kentucky,* Order, Ky. P.S.C. Case No. 2007-00177 (Oct. 30, 2007).

[13] *See In the Matter of: The Applications of Big Rivers Electric Corporation for: (1) Approval of Wholesale Tariff Additions for Big Rivers Electric Corporation, (2) Approval of Transactions, (3) Approval to Issue Evidences of Indebtedness, and (4) Approval of Amendments to Contracts; and of E.On U.S., LLC, Western Kentucky Energy Corp., and LG&E Energy Marketing, Inc. for Approval of Transactions,* Ky. P.S.C. Case No. 2007-00455, Joint Applicants' Post-Hearing Brief, at p. 45 (Dec. 31, 2008) (describing 2006 amendment to KRS 279.120).

The first of the two smelters gave notice on August 20, 2012 that it would terminate its retail service contract and cease operations in a year. The second smelter gave its one-year notice of termination of its contracts a few months later, on January 31, 2013. Although a series of negotiations and regulatory actions resulted in the smelters eventually avoiding closure of their respective facilities by obtaining their power requirements from other sources,[14] the impact on Big Rivers and its Members from the loss of the smelter load was nevertheless substantial.

Q. What immediate effects did the loss of the smelter loads impose on Big Rivers?

A. In addition to having to file two rate cases to address the impending revenue loss, the imminent loss of the smelter loads had an overwhelmingly negative effect on Big Rivers' credit ratings. In a matter of three days beginning February 4, 2013, the three credit rating agencies reduced Big Rivers' ratings two levels below investment grade.[15] Those actions triggered a mandatory notice by Big Rivers to RUS of the ratings downgrades.[16] To avoid a default

[14] *See* Ky. P.S.C. Case Nos. 2013-00221, 2013-00413.

[15] Fitch Ratings, Inc. ("Fitch") (on Feb. 6, 2013), S&P Global Ratings ("S&P") (on Feb. 6, 2013) and Moody's Investors Services, Inc. ("Moody's") (on Feb. 6, 2013) downgraded the credit ratings on Big Rivers' $83.3 million County of Ohio, KY Pollution Control Refunding Revenue Bonds, Series 2010A. In addition, S&P downgraded its long-term rating on Big Rivers.

[16] In accordance with Section 4.23 of the 2009 RUS Loan Contract, which is now found in Section 5.24 of Big Rivers' 2018 RUS Loan Contract, Big Rivers notified RUS in writing on February 7, 2013, of its failure to maintain two Credit Ratings of Investment Grade. Big Rivers provided a corrective plan to RUS in 2013 and a second corrective plan to RUS on March 25, 2015. An update to the 2015 plan was provided to RUS on July 29, 2016, and again on January 28, 2019.

under Big Rivers' 2009 loan contract with RUS (the "2009 RUS Loan Contract"), Big Rivers then had to provide the RUS a satisfactory "corrective plan" by which Big Rivers would regain at least two of its investment grade credit ratings. That requirement is incorporated into Big Rivers' 2018 loan contract with RUS (the "2018 RUS Loan Contract"). To this day, Big Rivers currently operates under the updated version of the corrective plan dated January 28, 2019, a copy of which is attached as Exhibit Berry-2.

Q. How did Big Rivers respond to the loss of the smelter load?

A. Since the smelters issued their termination notices, Big Rivers has diligently pursued the multi-faceted strategies of its Load Mitigation Plan and worked toward satisfying its corrective plan with RUS. Big Rivers filed two rate cases to address the smelter revenue loss. Big Rivers reduced excess generation by idling the Coleman Station and Reid Station Unit 1 generating plants and by terminating the Station Two Contracts. After scaling back its generation capacity, Big Rivers worked diligently to secure long-term power sales agreements with a number of municipal utilities, public power districts, and related entities, including entities in Nebraska and Missouri, as well as the KyMEA and OMU in Kentucky. It also developed an EDR, which helped

secure a $350 million expansion at the Aleris facility in Lewisport, Kentucky, resulting in a significant load increase on the Big Rivers system.

As I have noted, one of Big Rivers' most important goals is to regain an investment grade rating from all three ratings agencies, and Big Rivers' mitigation efforts are starting to show results in that regard. Fitch upgraded Big Rivers' rating on its pollution control debt to minimum investment grade on July 5, 2018. On December 4, 2019, Fitch affirmed that rating, which was based, in part, on a "supportive regulatory regime" and improved financial performance, which Fitch found is "largely attributable to the full implementation of the cooperative's risk mitigation strategy and approved rate plan."[17]

On July 27, 2018, Moody's upgraded the rating on Big Rivers' senior secured debt by one notch to Ba1, which is still one notch below investment grade. On November 13, 2019, Moody's issued an updated credit opinion maintaining Big Rivers' rating at Ba1, but indicated a positive outlook. Moody's cautioned that it "could take a negative rating action if there was a shift to a less credit supportive regulatory environment," and one of the factors that could lead to a downgrade from the current non-investment grade level is if recovery of regulatory assets does not occur in future proceedings.[18] Indeed,

[17] Fitch Press Release, dated December 4, 2019, attached as Exhibit Berry-3, at p. 1, 6.

[18] Moody's Credit Opinion, dated November 13, 2019, attached as Exhibit Berry-4, at p. 2.

Moody's emphasized that a factor that could lead to a credit rating upgrade is if "there is future regulatory support for cost recovery of the increasing regulatory asset account which would avoid potential write-offs while maintaining reasonably competitive rates."[19]

On January 16, 2019, S&P upgraded Big Rivers' issuer credit rating to BB+, and at the same time, it raised Big Rivers' rating on its pollution control debt to BB+. One factor that led to S&P's upgrade was KIUC's agreement to support Big Rivers' plans to apply to the Commission "for the recovery of investments in retired generation assets."[20]

Q. How does this recent history relate to Big Rivers' request to establish regulatory assets in this proceeding, subject to RUS approval, and amortize the Smelter Loss Mitigation Regulatory Assets over a period no longer than the term of the Member Contracts?

A. Through focus, dedication, and hard work – and with much appreciated regulatory support from the Commission – Big Rivers has succeeded in accomplishing much of what it set out to do when it began implementing the Load Mitigation Plan: right-sizing Big Rivers in order to stabilize Member rates and mitigate against the economic impacts of the smelter load loss. Big

[19] *Id.*

[20] S&P January 16, 2019 Credit Opinion, Exhibit Berry-5.

Rivers' mitigation efforts are ongoing, and Big Rivers continues its work toward the goal of regaining and maintaining all three of its investment grade credit ratings. Obtaining the Commission's approval to establish the regulatory assets requested in the application, and to amortize Smelter Loss Mitigation Regulatory Assets over a period no longer than the term of the Member Contracts is an important step in accomplishing that goal.

And lest it go without saying, all of the Smelter Loss Mitigation Regulatory Assets Big Rivers seeks to recover in this proceeding are expenses Big Rivers incurred either as a direct or indirect result of the loss of the smelter load six years ago or Big Rivers' efforts to mitigate that loss.

Q. What has the Commission's response been to the Load Mitigation Plan?

A. The Commission has been supportive of Big Rivers' Load Mitigation Plan, a fact that has not been lost on the credit rating agencies as reflected numerous times in Big Rivers' ratings reports. In the first of the two smelter-related rate cases, the Commission found that it was reasonable to afford Big Rivers time to pursue its mitigation strategies.[21]

In the second of those cases, the Commission rejected a recommendation to impose an "excess capacity adjustment" on Big Rivers:

> It is the Commission's intent to permit sufficient rate relief to allow Big Rivers to adequately fund its operations, while

[21] *In the Matter of: Application of Big Rivers Electric Corporation for an Adjustment of Rates,* Order, Ky. P.S.C. Case No. 2012-00535 (Oct. 29, 2013), at p. 19.

> minimizing the impact on ratepayers. However, it is not the Commission's intent, either explicitly or implicitly, to undermine Big Rivers' financial integrity or force Big Rivers to take actions that would thwart its ability to improve its financial and credit standings.[22]

At the urging of the intervenors in that case, the Commission ordered a focused management audit of Big Rivers' "strategic planning, management, and decision-making" relating to the mitigation efforts.[23] The October 6, 2015, final report in that focused audit "concluded that Big Rivers has largely followed the Load Mitigation Plan in a step-wise manner, consistent with the plan, which identified both short-term and long-term strategies to mitigate the loss of load." The findings in the audit were viewed positively by the credit ratings agencies. Moody's, for example, in its latest report, found an "overall credit positive" impact from the focused audit.[24]

[22] *In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period,* Order, P.S.C. Case No. 2013-00199 (Apr. 25, 2014), at p. 18. This same statement appears a second time in the order at pages 19-20.

[23] *Id.* at p. 48.

[24] Moody's Credit Opinion dated November 13, 2019, attached as Exhibit Berry-4, at p. 5.

Q. Please explain how failure to establish the regulatory assets requested in this proceeding would be detrimental to Big Rivers' goal of regaining its investment grade credit ratings.

A. If Big Rivers does not receive both the Commission's and RUS's approval to establish the regulatory assets related to the retirement of the Coleman Station and Reid Station Unit 1, Big Rivers would have to write-off the remaining, undepreciated book value of its historical capital investment in the Coleman Station and in Reid Station Unit 1. As of December 31, 2019, those amounts totaled approximately $117.1 million[25] and $6 million, respectively. It will also incur other expenses related to decommissioning and retirement of those Stations. The credit ratings agencies have indicated that a lack of regulatory support for recovery of Big Rivers' assets, such as the Coleman Station and Reid Station Unit 1 which have benefited its Members for several decades, could impose a credit challenge that would inhibit Big Rivers' ability to achieve an investment grade credit rating.

In short, if the Commission were to force Big Rivers to write-off the remaining net book value of its investment, it could signal to the ratings agencies a loss of regulatory support for the recovery of prudent capital

[25] The estimated unrecovered net book value of the Coleman Station assumes that the Commission approves Big Rivers' request in its 2020 Environmental Compliance Plan proceeding (Case No. 2019-00435) to move the FGD scrubber at Coleman Station to Wilson Station, which results in a $23.3 million reduction in the current $140.4 million unrecovered net book value of the Coleman Station.

investments in generating assets. Not only could this endanger Big Rivers' current investment grade rating with Fitch, it would likely inhibit efforts to regain investment grade ratings from Moody's and S&P.

Q. Why are investment grade credit ratings important to Big Rivers?

A. As described above, Big Rivers' loan contract with RUS requires Big Rivers to maintain an investment grade rating from at least two rating agencies, and if it fails to do so, to create a corrective plan satisfactory to the RUS that is reasonably expected to achieve two credit ratings of investment grade. This requirement alone makes investment grade credit ratings important to Big Rivers. Because Big Rivers does not have two investment grade ratings, however – and despite the fact that is operating under a corrective plan (under Section 5.13 of the 2017 RUS Loan Contract) to restore at least two investment grade ratings – RUS has the right at any time to direct Big Rivers to deposit all cash proceeds from its assets, except cash proceeds deposited or required to be deposited with the Trustee pursuant to the Indenture, into a segregated account pursuant to the Lockbox Agreement attached to the 2009 RUS Loan Contract. This includes amounts paid to Big Rivers by its Members on their respective wholesale power bills.

Additionally, Big Rivers' credit ratings determine the interest rates and other terms under future borrowings. Regaining all three of its investment grade credit ratings will therefore result in a material savings on future borrowings, a fact that will be very important in the coming years as Big Rivers

seeks to refinance its $245.5 million outstanding RUS Series B note that comes due in December 2023 and its $83.3 million Series 2010A Pollution Control Bonds that mature in July 2031, but which Big Rivers has the option to call and re-issue beginning in July 2020.

In addition to interest savings on future borrowings, Big Rivers would also recognize immediate cost savings in the form of reduced fees and interest charges associated with its existing Senior Secured Credit Agreement with National Rural Utilities Cooperative Finance Corporation (CFC).

Achieving and maintaining investment grade credit ratings will also reduce, or eliminate, the collateral requirements associated with the power purchase and sales agreements that are a vital part of the Load Mitigation Plan.

The combined effects of regaining those investment grade ratings are significant, to say the least.

Q. Would having to write-off the remaining net book value of Big Rivers' investment in the Coleman Station and Reid Station Unit 1 have any negative consequences?

A. Yes. For Big Rivers to regain and maintain an investment grade credit rating from all three credit rating agencies, it is important for Big Rivers to maintain regulatory support, to maintain its credit metrics, and to address the other concerns that the ratings agencies have expressed. Specifically, forcing Big Rivers to immediately write-off its unrecovered investment and costs of

retiring assets that have benefited Big Rivers' Members for decades would directly undermine Big Rivers' efforts to regain its investment grade ratings, and would very likely cause Big Rivers to default on its credit agreements.

Additionally, such a write-off would result in a corresponding reduction in Bondable Additions under Big Rivers' Indenture with its lenders. Because the amount of Bondable Additions determines the amount of new debt Big Rivers can issue under the Indenture, a write-off would directly reduce Big Rivers' ability to issue new debt to finance capital projects in the future. Indeed, Big Rivers anticipates financing a portion of the projects described in its recent application to approve its 2020 Environmental Compliance Plan, Case No. 2019-00435. Thus, if the Commission denies Big Rivers' request to establish these regulatory assets, subject to RUS approval, the credit rating agencies may determine that Big Rivers has lost the support of the Commission, which would likely increase the cost of those projects or even prevent their completion entirely.

For these reasons, the Commission should allow Big Rivers to establish the regulatory asset related to the retirement of the Coleman Station and the regulatory asset related to the retirement of Reid Station Unit 1, subject to RUS approval.

C. THE COMMISSION SHOULD ALLOW BIG RIVERS TO AMORTIZE AND RECOVER THE SMELTER LOSS MITIGATION REGULATORY ASSETS.

Q. Please explain the importance of the Commission authorizing Big Rivers to amortize the Smelter Loss Mitigation Regulatory Assets over a period no longer than the length of its "all-requirements" contracts with its Members.

A. As with the establishment of the regulatory assets in this proceeding, granting approval for Big Rivers to amortize and recover the Smelter Loss Mitigation Regulatory Assets is an important step in Big Rivers regaining its investment grade credit rating. Indeed, Moody's has indicated that it may *downgrade* Big Rivers' current credit rating if recovery of regulatory assets does not occur in future rate proceedings, but that an *upgrade* may occur if "there is future support for cost recovery of the increasing regulatory asset account which would avoid potential write-offs while maintaining reasonably competitive rates."[26] Thus, approval of Big Rivers' requested relief in this proceeding would signal the Commission's continued support of Big Rivers and its Load Mitigation Plan. This, in turn, would directly support Big Rivers' efforts to regain all three of its investment grade credit ratings.

[26] Moody's Credit Opinion dated November 13, 2019, attached as Exhibit Berry-4, at p. 2.

Notwithstanding the fact that authorization to recover the Smelter Loss Mitigation Regulatory Assets through amortization will support an improvement in Big Rivers' credit ratings, it bears reiterating that Big Rivers' Members will also benefit by avoiding a simultaneous increase in base rates. To the contrary, Big Rivers seeks to begin recovering the Smelter Loss Mitigation Regulatory Assets while also seeking approval to implement the New TIER Credit that will result in a bill credit for every year in which Big Rivers' TIER exceeds the 1.30 that was previously authorized in the 2013 Rate Case. Therefore, the Commission's approval for Big Rivers to amortize the Smelter Loss Mitigation Regulatory Assets is critical because not only does it minimize the chance that Big Rivers would need to seek a future base rate increase, it would simultaneously authorize a means of returning excess margins to Members.

D. IF RECOVERY OF THE REGULATORY ASSETS IS APPROVED, BIG RIVERS WILL PRUDENTLY UTILIZE A PORTION OF ITS MEMBER EQUITY TO REDUCE THE BALANCE OF THE SMELTER LOSS MITIGATION REGULATORY ASSETS.

Q. If the Commission approves the requested relief, will there be any additional benefits to Big Rivers' Members?

A. Yes. If the Commission approves the relief requested in this proceeding, Big Rivers will (in 2021) reduce the total balance of the Smelter Loss Mitigation Regulatory Assets by applying that amount of its equity that exceeds 80% of the equity headroom required by its syndicated bank facility as of December 31, 2020.

Q. How did Big Rivers decide to utilize the Member equity that exceeds 80% of the equity headroom required by its syndicated bank facility to reduce the balance of the Smelter Loss Mitigation Regulatory Assets?

A. Big Rivers' syndicated bank facility requires that it maintain a minimum amount of Member equity. That amount is determined by a formula included in Big Rivers' syndicated bank facility. Specifically, the syndicated bank facility requires that Big Rivers maintain a base level of Member equity, and the minimum level of Member equity Big Rivers is required to maintain is increased by 50% of Big Rivers' net margins each year. Currently, Big Rivers is required to maintain a minimum Member equity balance of $425,865,848. A calculation of the estimated minimum Member equity balance under Big Rivers' syndicated bank facility as of December 31, 2020 and the estimated 80% utilization, is attached hereto as Exhibit Berry-6. Based upon the current Members equity balance, Big Rivers determined that utilizing the amount above 80% of the "equity headroom" was appropriate because it continues to preserve adequate equity to support financial stability and our efforts to regain investment grade ratings while simultaneously freeing up a portion of that equity to return to Members, consistent with our non-profit, cooperative mission to safely deliver competitive and reliable wholesale power and cost-effective shared services desired by our Members.

Q. What is the estimated reduction in the balance of the Smelter Loss Mitigation Regulatory Assets that would result from applying this portion of Big Rivers' current equity?

A. The current estimated amount of Big Rivers' December 31, 2020 equity "headroom" above 80% of the required equity amounts is $91 million, which will be utilized to directly reduce the balance of the Smelter Loss Mitigation Regulatory Assets. Thus, if the Commission approves the requested relief, in 2021, Big Rivers Members will receive the benefit of an immediate reduction in the total value of the Smelter Loss Mitigation Regulatory Assets by an estimated $91 million.

Q. Does this fulfill Big Rivers' agreement to prudently utilize its Member equity, as was agreed in the Settlement Agreement in the Station Two Case?

A. Yes. Pursuant to the Settlement Agreement in Case No. 2018-00146, Big Rivers agreed "to propose the reasonable and prudent utilization of its member equity in such a way as to best achieve the dual goals of: 1) minimizing member rates; and 2) improving its credit metrics to best achieve and maintain an investment grade credit rating."[27] In accordance with that Settlement Agreement, Big Rivers is proposing to utilize 80% of the year-ending December

[27] *In the Matter of: Application of Big Rivers Electric Corporation for Termination of Contracts and a Declaratory Order and for Authority to Establish a Regulatory Asset,* Settlement Agreement, Ky. P.S.C. Case No. 2018-000146 (Oct. 22, 2019), at 8, ¶ 5.

31, 2020 equity headroom, as calculated in its syndicated bank facility. As noted above, that amount is currently estimated to be approximately $91 million.

Please note that – in order to avoid an aberrational result in 2021 – Big Rivers plans to exclude the one-time expense associated with utilizing this portion of the Member equity for the purpose of calculating the New TIER Credit for calendar year 2021.

Thus, Big Rivers believes that utilizing this amount of Member equity is prudent because it mitigates against the risk of future rate increases and supports efforts to regain uniform investment grade credit ratings, while still preserving a reasonable amount of Member equity to help maintain strong financial performance moving forward.

Q. Does the relief requested satisfy Big Rivers' goals to minimize Member rates and improve its credit metrics, as stated in the Station Two Case Settlement Agreement?

A. Yes. Big Rivers believes that the relief requested in this proceeding will achieve both of these goals.

First, the New TIER Credit that Big Rivers proposes is forecast to minimize the base rates charged to Big Rivers' Members by stabilizing base rates for the foreseeable future and continuing to offer a monthly bill credit through the MRSM Rider, which will provide the opportunity for Big Rivers' Members to effectively pay less than the established base rates. Even in years when TIER may fall below 1.30, the TIER Credit would not impose a rate increase; it would simply slow the amortization of the Smelter Loss Mitigation Regulatory Assets until the 1.30 TIER can again be reached.

Second, prior credit opinions provided by the credit ratings agencies have indicated that the Commission's approval of recovery of the Smelter Loss Mitigation Regulatory Assets would support a reinstatement of Big Rivers' investment grade credit rating. Moreover, utilizing a 1.30 TIER threshold to determine the amount of the credit owed to Big Rivers' Members will allow Big Rivers to preserve the capital necessary to maintain an investment grade credit rating, once achieved.

Finally, application of Member equity above 80% of the equity headroom to reduce the total balance of the Smelter Loss Mitigation Regulatory Assets will decrease the chances that Big Rivers will have to seek base rate increases in the future to be able to recover the Smelter Loss Mitigation Regulatory Assets, and will also help Big Rivers achieve an investment grade credit rating.

IV. CONCLUSION

Q. Please summarize the relief requested by Big Rivers in this proceeding.

A. Big Rivers seeks approval from the Commission to:

(1) declare the Wilson Station "used and useful" to serve Big Rivers' Members and cease deferring the depreciation expense of the Wilson Station as of January 1, 2021;

(2) subject to RUS approval, establish regulatory assets for:

(a) the remaining net book value of the Coleman Station, and other costs related to the retirement of the Coleman Station, such as the costs of decommissioning; and

(b) the remaining net book value of Reid Station Unit 1, and other costs related to the retirement of Reid Station Unit 1, such as the costs of decommissioning;

(3) approval to amortize the Smelter Loss Mitigation Regulatory Assets over a period no longer than December 31, 2043;

(4) approval to create the New TIER Credit and revise Big Rivers' MRSM Rider as described more completely in the Application and supporting Testimony of Paul G. Smith.

For the reasons described in my testimony and elsewhere throughout this filing, I recommend that the Commission find that the requested relief will result in fair, just, and reasonable rates for Big Rivers' Members and grant Big Rivers all of the requested relief.

Q. Does this conclude your testimony?

A. Yes.

BIG RIVERS ELECTRIC CORPORATION

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. 2020-00_____

VERIFICATION

I, Robert W. ("Bob") Berry, 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

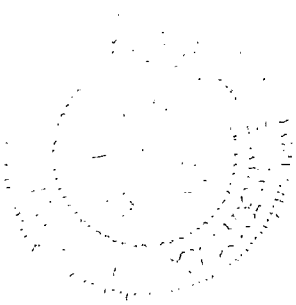
Robert W. ("Bob") Berry

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Robert W. ("Bob") Berry on this the 27th day of February, 2020.

Notary Public, Kentucky State at Large

My Commission Expires October 31, 2020



Professional Summary

Robert W. Berry
President and Chief Executive Officer
Big Rivers Electric Corporation
201 Third Street
Henderson, KY 42420
Phone: 270-844-6031

Professional Experience

Big Rivers Electric Corporation
- President and Chief Executive Officer – 2014 to present
- Vice President, Production – 2009 to 2014

Western Kentucky Energy – 1998 to 2009
- General Manager
- Plant Manager, Reid/Green/HMP&L Station
- Plant Manager, Coleman Station – 2000 to 2003
- Maintenance Manager, Reid/Green/HMP&L Station – 1998 to 2000

Big Rivers Electric Corporation – 1981 to 1998
- Maintenance Superintendent, Green Station
- Maintenance Supervisor, Green Station
- Various and Sundry Maintenance and Operations Positions

Education

BS Business Management
- Mid-Continent University

Associate in Applied Science, Mechanical Engineering Technology
- University of Kentucky Community College

System Mechanical Maintenance Apprentice Program
- Certified by Kentucky Department of Higher Education

Management, Leadership and Communication Training
- Employer-sponsored programs

Case No. 2020-00_____

Exhibit Berry–2

Rural Utilities Service Corrective Plan

Big Rivers
ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

Updated Corrective Plan to Achieve Two Credit Ratings of Investment Grade

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January 28, 2019

Big Rivers Electric Corporation
Corrective Plan to Achieve Two Credit Ratings of Investment Grade
January 28, 2019

Contractual Covenant: Maintenance of Two Credit Ratings of Investment Grade

If Big Rivers fails to maintain two Credit Ratings of Investment Grade, per Section 5.24 – Maintenance of Credit Ratings of the First Amended and Restated Consolidated Loan Contract, dated as of January 2, 2018, between Big Rivers Electric Corporation ("Big Rivers") and United States of America acting by and through the Administrator of the Rural Utilities Service (RUS) (the "2018 Agreement")[1], it must notify the RUS in writing to that effect within five (5) days after becoming aware of such failure. Big Rivers became aware of its failure to maintain two Credit Ratings of Investment Grade when Fitch Ratings downgraded its rating from BBB- to BB on February 6, 2013. Standard & Poor's previously downgraded Big Rivers from BBB- to BB- on February 4, 2013. Big Rivers notified the RUS in writing on February 7, 2013, pursuant to Section 5.24(b) of the 2018 Agreement.

In addition, pursuant to Section 5.24(c) of the 2018 Agreement, within thirty (30) days of the date on which Big Rivers fails to maintain two Credit Ratings of Investment Grade, Big Rivers in consultation with the RUS shall provide a written plan satisfactory to the RUS setting forth the actions that shall be taken that are reasonably expected to achieve two Credit Ratings of Investment Grade. On March 7, 2013, Big Rivers submitted its Corrective Plan to Achieve Two Credit Ratings of Investment Grade (the "Corrective Plan") with the RUS as required under Section 5.24(c) of the 2018 Agreement. Since filing its original Corrective Plan in 2013, Big Rivers has filed two Updated Corrective Plans; the first update was filed with the RUS on March 25, 2015, and the second update was filed with the RUS on July 29, 2016. This document is submitted by Big Rivers to the RUS as an additional update to its Corrective Plan that is expected to be satisfactory to the RUS under Section 5.24(c) of the 2018 Agreement.

Background

On August 20, 2012, Century Aluminum Company ("Century") gave its one year contract termination notice to Kenergy Corp. and Big Rivers, whereby Century ceased purchasing power from Big Rivers for the smelter operations at the Hawesville, Kentucky facility on August 20, 2013. Century was the source of approximately thirty-six percent (36%) of Big Rivers' wholesale revenues or approximately $205 million for the twelve months ending December 31, 2012.

On January 31, 2013, Alcan Primary Products Corporation ("Alcan") gave its one year contract termination notice to Kenergy Corp. and Big Rivers, whereby Alcan ceased purchasing power from Big Rivers for the smelter operations at the Sebree smelter located in Robards, Kentucky on January 31, 2014. Alcan was the source of approximately twenty-eight percent (28%) of Big Rivers' wholesale revenues or approximately $155 million for the twelve months ending December 31, 2012.

[1] The 2018 Agreement amended and restated the previous loan contract dated July 16, 2009, between Big Rivers and the RUS (the "2009 Agreement"). Section 5.24 of the 2018 Agreement replaces, and is identical to, Section 4.23 of the 2009 Agreement.

Big Rivers Electric Corporation
Corrective Plan to Achieve Two Credit Ratings of Investment Grade
January 28, 2019

As a result of Big Rivers receiving Alcan's notice of termination, all three rating agencies downgraded their credit ratings of Big Rivers' $83.3 million County of Ohio, KY Pollution Control Refunding Revenue Bonds, Series 2010A (the "Series 2010A Bonds") (Standard & Poor's on February 4, 2013, Fitch Ratings on February 6, 2013, and Moody's Investors Service on February 6, 2013).

Rating Agencies' Focus

Some of the key areas which the rating agencies focus on, when determining Big Rivers' credit rating, include:

1) Access to and maintenance of liquidity;

2) Cost recovery and financial metrics; and

3) Securing replacement load for the excess generation capacity that resulted from the terminations of the Century and Alcan aluminum smelters' contracts in 2013 and 2014, respectively.

As part of Big Rivers' corrective plan to achieve and maintain two Credit Ratings of Investment Grade, Big Rivers has focused on these key areas, as discussed in the following sections.

Access to and Maintenance of Liquidity

Stability of Credit

Big Rivers current wholesale contracts with its Members are all requirements contracts that run through 2043. Big Rivers' Members have the obligation to purchase their full-requirements (except the smelter loads) from Big Rivers throughout the tenure of the contracts. While Big Rivers' rates are contingent on approval of the KPSC, Big Rivers has consistently been granted rates sufficient to enable it to maintain its debt covenant requirements. The KPSC has approved two base rate increases since the smelter contract terminations in 2013 and 2014. Additionally, the KPSC approved the recovery of Big Rivers' capital costs and related operation and maintenance expenses associated with its 2012 Environmental Compliance Plan (ECP), for compliance with the Mercury and Air Toxics Standards (MATS) rule. See "Cost Recovery and Financial Metrics" below for additional detail.

Lines and Letters of Credit

In September 2014, Big Rivers and CFC negotiated and executed an Engagement Letter for a three-year, $130 million Syndicated Revolving Credit Facility (the "2015 Credit Agreement"). Approximately $26 million, of the total $130 million facility, was reserved for interim financing of capital projects included in Big Rivers' 2012 ECP. In October 2014, Big Rivers received commitments from lenders totaling $190 million and allocated the commitments proportionately to

remain at the $130 million amount originally requested. The KPSC approved the transaction in February 2015, and the 2015 Credit Agreement was executed on March 5, 2015.

In September 2017, the 2015 Credit Agreement was amended and extended to, among other things, reduce the total facility amount by $30 million, from $130 million to $100 million (primarily to remove the $26 million amount reserved for interim financing of Big Rivers' 2012 ECP capital projects, which Big Rivers had secured long-term RUS financing for) and extend the maturity date from March 5, 2018, to September 18, 2020.

The 2015 Credit Agreement provides Big Rivers significant flexibility to meet short-term borrowing needs by offering multiple loan options and providing an embedded letter of credit facility which allows Big Rivers to issue letters of credit for up to $50 million.

2012 Environmental Compliance Plan (ECP) for Mercury and Air Toxics Standards (MATS) Financing

In January 2018, Big Rivers secured long-term financing for the cost of capital projects included in its 2012 ECP for MATS compliance through an RUS guaranteed Federal Financing Bank (FFB) loan (the "W8 Loan"). In April 2018, Big Rivers received the W8 Loan proceeds of $25.63 million based on the actual costs of its 2012 ECP capital projects.

2013-2015 Transmission Construction Work Plan Financing

In January 2018, Big Rivers also secured long-term financing for the cost of capital projects included in its 2013-2015 Transmission Construction Work Plan through an RUS guaranteed FFB loan (the "X8 Loan"). In April 2018, Big Rivers received the X8 Loan proceeds of $17.965 million based on the actual costs of its 2013-2015 Transmission Construction Work Plan capital projects.

RUS Series A Note

In April 2018, Big Rivers prepaid the total outstanding balance of its RUS Series A Note, which consisted of $65.456 million of outstanding principal and approximately $217 thousand of accrued interest.

RUS Series B Note

Currently, Big Rivers intends to refinance the $245.5 million RUS Series B Note, which matures in December 2023. If refinancing the RUS Series B Note with the RUS is not available, Big Rivers intends to refinance it with other counterparties.

Big Rivers maintains strong relationships with CFC and CoBank and completed significant financings with each of them in 2012. Additionally, as discussed above, Big Rivers was oversubscribed in its most recent syndicated facility by nearly 50%. The relationships Big Rivers currently has, as well as, the access to capital markets that Big Rivers will be afforded when it regains Investment Grade ratings from each of the three rating agencies should allow Big Rivers ample opportunities to refinance the RUS Series B Note prior to its December 2023 maturity date.

Cost Recovery and Financial Metrics

2012 Rate Case (Case No. 2012-00535) - Century

As a result of Century's contract termination notice, received on August 20, 2012, Big Rivers filed an application with KPSC on January 15, 2013, requesting authority to adjust its rates for wholesale electric service. The KPSC entered an order on October 29, 2013, granting Big Rivers an annual base rate revenue increase of $54.2 million, effective August 20, 2013.

In its order, the KPSC excluded the Coleman plant depreciation expense from rate recovery. Additionally, the KPSC directed Big Rivers to begin deferring recognition of depreciation expense on the Coleman plant, effective September 2013, and start recording that depreciation to a regulatory asset account, instead of expense, to be considered for recovery in rates at a future point in time. The KPSC's order indicated this action was being taken due to the planned temporary idling of Coleman, the length of time the plant will be idled, and the impact of the rate increase on customers. As of December 31, 2018, the cumulative deferred depreciation expense for the Coleman plant, included in the related regulatory asset balance, was $31.4 million, which management believes is probable of future recovery through rates.

The wholesale rate increase granted by the KPSC resulted in a wholesale base rate increase of approximately: 21.9% for rural customers; 11.8% for large industrial customers; and 11.2% for the remaining aluminum smelter (Century Aluminum Sebree LLC, formerly Alcan Primary Products Corporation).

2013 Rate Case (Case No. 2013-00199) - Alcan

As a result of Alcan's contract termination notice, received on January 31, 2013, the Company filed an application with KPSC on June 28, 2013, requesting authority to adjust its rates for wholesale electric service. The Company proposed to temporarily offset this rate increase by utilization of the Member Rate Stability Mechanism (MRSM) and to use transmission revenues from the smelters to replenish the reserve funds used for the MRSM. The KPSC entered an order on April 25, 2014, granting Big Rivers an annual base rate revenue increase of $36.2 million, effective February 1, 2014. The KPSC also approved Big Rivers' proposal to temporarily offset the rate increase by utilization of MRSM.

In its order, the KPSC approved Big Rivers' 2012 Depreciation Study, but excluded the Wilson plant depreciation expense from rate recovery. Similar to the accounting treatment prescribed for the Coleman depreciation expense (in Case No. 2012-00535), the KPSC directed Big Rivers to begin deferring recognition of depreciation expense on the Wilson plant, effective February 2014, and start recording that depreciation to a regulatory asset account, instead of expense, to be considered for recovery in rates at a future point in time. The KPSC's order indicated this action was taken due to the Wilson generation capacity no longer being needed to serve Big Rivers' native load

customers. Additionally, the KPSC directed Big Rivers to continue deferring recognition of the Coleman depreciation expense and recording that amount to a regulatory asset account, per its previous order in Case No. 2012-00535.
As of December 31, 2018, the cumulative deferred depreciation expense for the Wilson plant, included in the related regulatory asset balance, was $99.9 million, which management believes is probable of future recovery through rates.

The rate increase granted by the KPSC in Case No. 2013-00199 resulted in a wholesale base rate increase of approximately 16.3% for rural customers and 13.7% for large industrial customers.

Big Rivers' current rates are competitive in the Commonwealth of Kentucky, as well as the nation, and provide Big Rivers' strong financial results sufficient to ensure organizational viability.

Replacement Load and Addressing Reliance on Off-System Sales

Big Rivers has made significant strides toward replacing the 400MW of replacement load included in Big Rivers' financial forecast. Big Rivers has secured contracts with three entities in Nebraska (NeNPPD, City of Wayne, and City of Wakefield) (Nebraska Consortium) for power supply contracts that run from 2018-2026 (with an on-going evergreen provision, if desired by the parties). The entities' peak Load to be served by Big Rivers is roughly 85MW.

In July 2015, Big Rivers received approval from the KPSC to execute the wholesale power contracts with the Nebraska Consortium. These contracts are estimated to generate approximately $62 million in net margins for the ten-year period ending 2026. Big Rivers will flow the prior year's margins, from the Nebraska contracts, back to its Members provided that (i) Big Rivers' actual margins are greater than the margins that would have provided the Times Interest Earned Ratio (TIER) that the KPSC used to establish the revenue requirement in Big Rivers' most recent general rate proceeding (the "Revenue Requirement TIER"); (ii) the Nebraska Margins are greater than zero; and (iii) Big Rivers' average daily balance of unrestricted cash and temporary investments for the last three calendars months of the previous calendar year (the "Average Cash Balance") is greater than $60 million.

Big Rivers has seen roughly 25MW of internal commercial load growth since the smelters provided their termination notice in late 2012. Big Rivers also has a current customer, Aleris, who has announced a $350 million expansion in our territory. The KPSC and RUS approved the Aleris contract in June 2016.

In addition to the contracts with the Nebraska Consortium, Big Rivers has entered into long-term agreements with two Kentucky counterparties. In July of 2016, Big Rivers entered into a ten-year (2019-2029) agreement to sell a 100 MW dispatchable block of power to the Kentucky Municipal Energy Agency. In June of 2018, Big Rivers entered into a six and one-half year agreement for full-requirements service to Owensboro (Kentucky) Municipal Utilities (OMU). OMU's peak load is approximately 180 MW.

The contracts with the Nebraska Consortium, the KyMEA, and OMU have been approved by the Kentucky Public Service Commission and RUS. The combination of these wholesale contracts and

the commercial and industrial load growth described above secures stable contracts for essentially all of Wilson Station's projected generation for the next ten years.

Recent Credit Rating Upgrades

Fitch Ratings Upgrade to 'BBB-' (July 5, 2018)

On July 5, 2018, Fitch Ratings upgraded its rating of Big Rivers' $83.3 million County of Ohio Pollution Control Revenue Bonds, Series 2010A, from 'BB' to 'BBB-', returning Big Rivers to Investment Grade. In its report, Fitch highlighted the following items as primary drivers for its upgrade of Big Rivers' credit rating:

- Improved, sustainable finances, including solid financial results achieved in fiscal year 2017, with higher liquidity and lower leverage, and expectations for sustained improvement over the near term, largely attributable to the full implementation of Big Rivers' risk mitigation strategy and approved rate plan;
- Ongoing and successful management of Big Rivers' long resource position with reduced exposure to short-term market sales over the next few years, with approximately 90% of Big Rivers' capacity being 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;
- Improved leverage profile in 2017 as a result of better financial margins than in previous years;
- Supportive regulatory policies and successful rate recovery efforts; and
- Adequate liquidity, with unrestricted cash and short-term investments totaling $65 million at fiscal year-end 2017, or about 70 days cash on hand, with expectations for liquidity to improve through 2019 with greater financial margins.

Note: In accordance with Section 5.9(g) of the 2018 Agreement, Big Rivers furnished a copy of Fitch's July 5, 2018, ratings report to the RUS by letter dated July 9, 2018.

Moody's Investors Service Rating Upgrade to 'Ba1' (July 26, 2018)

On July 26, 2018, Moody's Investors Service upgraded its rating of Big Rivers' Series 2010A bonds from 'Ba2' to 'Ba1'. In its report, Moody's cited the following items as primary reasons for its upgrade of Big Rivers' credit rating:

- Supportive regulatory environment and prospects for sustaining stronger financial metrics;
- Good working relationship with the Kentucky Public Service Commission (KPSC) as reflected in the credit supported rate case decisions rendered in 2013 and 2014, which resulted in approval of a combined annual wholesale power rate increase of approximately $90.4 million;
- Good progress in reducing its excess capacity since 2013, attributable to both supply-side and demand-side strategies, as well as reducing staff and controlling other expenses where feasible, without compromising reliability;

- Supply-side initiatives including idling its 443 MW coal-fired Coleman plant and taking steps to terminate the longstanding contracts with Henderson Municipal Power & Light (HMP&L) for the operation and maintenance of the HMP&L-owned Station Two plant; and
- Demand-side strategies including 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 capacity markets.

Note: In accordance with Section 5.9(g) of the 2018 Agreement, Big Rivers furnished a copy of Moody's July 26, 2018, ratings report to the RUS by letter dated July 30, 2018.

S&P Global Ratings Upgrade to 'BB+' (January 16, 2019)

On January 16, 2019, S&P Global Ratings upgraded its rating of both Big Rivers and the Big Rivers' Series 2010A bonds from 'BB' to 'BB+'. In its report, S&P cited the following items as primary reasons for its upgrade of Big Rivers' credit rating:

- Recent execution of several nonmember contracts of varying terms, which will reduce market exposure;
- Idling of the Coleman and Reid coal plants and termination of the Station Two contracts with Henderson Municipal Power and Light better align resources with load, reducing market exposure;
- Plans to apply to the Kentucky Public Service Commission in 2020 for rate recovery of investments in retired generation assets beginning in 2021; and
- Relatively stable debt balance, and refinancing plans for the approximately $245 million RUS Series B Note bullet maturing December of 2023 and the approximately $83 million Ohio County 2010A Bonds bullet maturing July 2031.

Note: In accordance with Section 5.9(g) of the 2018 Agreement, Big Rivers furnished a copy of the S&P January 16, 2019, ratings report to the RUS by letter dated January 17, 2019.

Big Rivers' Current Credit Ratings

The following table summarizes the credit rating scales used by the three major credit rating agencies, with Big Rivers' current credit rating from each rating agency highlighted in blue.

Big Rivers Electric Corporation
Corrective Plan to Achieve Two Credit Ratings of Investment Grade
January 28, 2019

Fitch	Moody's	S&P	
AAA	Aaa	AAA	Investment Grade
AA+	Aa1	AA+	
AA	Aa2	AA	
AA-	Aa3	AA-	
A+	A1	A+	
A	A2	A	
A-	A3	A-	
BBB+	Baa1	BBB+	
BBB	Baa2	BBB	
BBB-	Baa3	BBB-	
BB+	Ba1	BB+	Speculative Grade
BB	Ba2	BB	
BB-	Ba3	BB-	
B+	B1	B+	
B	B2	B	
B-	B3	B-	

Indicates Big Rivers' Current Credit Rating with each Agency

Summary

Big Rivers has rates in place that are sufficient to sustain its business. Big Rivers has executed long-term wholesale agreements totaling approximately 365 MW and has seen significant commercial and industrial growth. Wilson continues to operate at a high capacity factor, providing benefit to Big Rivers and its Members.

As previously mentioned, in July 2018 Big Rivers regained its investment grade credit rating from Fitch Ratings and was upgraded by Moody's Investors Service and S&P Global Ratings to one level below investment grade. We have confidence we will regain our investment grade ratings from Moody's and Standard & Poor's through maintaining strong financial metrics and continued demonstration of regulatory support from the Kentucky Public Service Commission.

Case No. 2020-00_____

Exhibit Berry–3
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

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Case No. 2020-00_____

Exhibit Berry–4
Moody's November 13, 2019, Credit Opinion

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
13 November 2019

Update

Rate this Research

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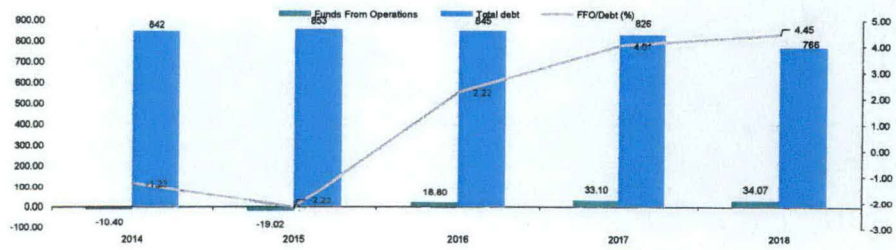
Big Rivers Electric Corporation

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

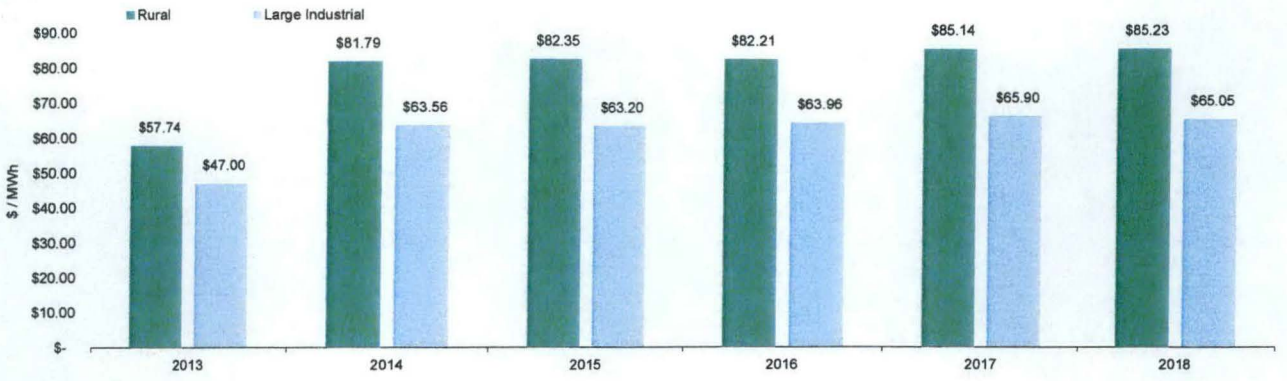
The KPSC ordered independent consultant's comprehensive management audit is credit positive for Big Rivers since it incorporates a combination of many supportive or neutral findings about Big Rivers' past decisions and future plans, as well as five specific, seemingly manageable, recommendations. Of 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

Case No. 2020-00_____

Exhibit Berry–5

S&P January 16, 2019, Credit Opinion

S&P Global
Ratings

RatingsDirect®

Summary:

Big Rivers Electric Corp., Kentucky; Rural Electric Coop

Primary Credit Analyst:
David N Bodek, New York (1) 212-438-7969; david.bodek@spglobal.com

Secondary Contact:
Doug Snider, Centennial + 1 (303) 721 4709; doug.snider@spglobal.com

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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.

Big Rivers Electric Corporation
Calculation of Minimum Members' Equities Balance
Per 2015 CFC Syndicated Senior Secured Credit Agreement
as Amended September 19, 2017
As of December 31, 2020

1	Base Amount -				$	375,000,000
2						
3	Net Margins -					
4	Year	Net Margins		50%		
5	2014	$ 32,667,439	$	16,333,720		
6	2015	11,216,118		5,608,059		
7	2016	12,905,266		6,452,633		
8	2017	12,998,423		6,499,212		
9	2018	15,229,825		7,614,913		
10	2019	16,714,625		8,357,313		
11		$ 101,731,696	$	50,865,848		50,865,848
12	Minimum Members' Equities Balance				$	425,865,848
13						
14	Members' Equities Balance (Note)					539,664,075
15						
16	Members' Equities Headroom				$	113,798,227
17						
18	Proposed Utilization of Members' Equities					80.0%
19						
20	80% of Members' Equities Headroom				$	91,038,582
21						
22						
23	**Note:** Members' Equities Balance					
24	December 31, 2019 Balance				$	523,164,075
25	2020 Estimated Net Margins					16,500,000
26	December 31, 2020 Estimated Balance				$	539,664,075

Case No. 2020-00_____
Exhibit Berry-6
Direct Testimony of Robert W. Berry

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	)	**Case No.**
EXPENSES, ESTABLISH REGULATORY ASSETS,	)	**2020-00_____**
AMORTIZE REGULATORY ASSETS, AND	)	
OTHER APPROPRIATE RELIEF	)	

DIRECT TESTIMONY

OF

PAUL G. SMITH
CHIEF FINANCIAL OFFICER

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

FILED: **February 28, 2020**

Application Exhibit E
Direct Testimony of Paul G. Smith

DIRECT TESTIMONY

OF

PAUL G. SMITH

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DIRECT TESTIMONY

OF

PAUL G. SMITH

I. INTRODUCTION

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

A. My name is Paul G. Smith, and my business address is 201 Third Street, Henderson, Kentucky 42420. I am the Chief Financial Officer ("CFO") for Big Rivers Electric Corporation ("Big Rivers").

Q. Please summarize your education and professional experience.

A. I received a Bachelor of Science degree in Industrial Management from Purdue University and a Masters of Business Administration degree, with honors, from the University of Chicago. I am a Certified Public Accountant in the State of Ohio and a member of the American Institute of Certified Public Accountants. I am a past member of the Edison Electric Institute ("EEI") Economic Regulation and Competition Committee and the EEI Budgeting and Financial Forecasting Committee.

I began my career in 1982 as a public accountant in the Chicago office of Deloitte & Touche, and from 1984 to 1987 in the Indianapolis office of Crowe, Chizek & Co. Beginning in 1987, I held various analyst and managerial

positions with Duke Energy Corporation and its predecessor companies, in Budgets and Forecasts, Rates and Regulatory Affairs, Investor Relations, and the International Business Unit. Beginning in 2001, I was appointed to various executive level positions, including General Manager of Budgets and Forecasts with responsibility for Cinergy Corp.'s financial planning and analysis department, Vice President of Rates with responsibility for all state and federal regulated rate matters, including revenue requirements, cost of service and rate design for Duke Energy Kentucky, Inc. and Duke Energy Ohio, Inc., and Vice President of Retail Marketing with responsibility for all activities to launch a start-up competitive retail energy business.

In 2012, I joined NextEra Energy Transmission, the competitive transmission development subsidiary of NextEra Energy, Inc., as Senior Director of Business Management. My responsibilities included managing all financial activities for the competitive transmission business, including accounting and financial reporting, budgeting and financial planning, and corporate development analytics. In addition, I was responsible for the compliance function and directing the preparation of state, Regional Transmission Organization, and Federal Energy Regulatory Commission ("FERC") revenue requirement filings.

In 2018, I accepted the position of CFO at Big Rivers.

Q. Please summarize your duties at Big Rivers.

A. As CFO, I am responsible for all financial, regulatory, strategic planning and risk management activities. Such activities include accounting and financial reporting, payroll, budgets, finance, tax, rates and regulatory affairs, risk management and strategic planning.

Q. Have you previously testified before the Kentucky Public Service Commission ("Commission")?

A. Yes. Most recently, I submitted testimony on behalf of Big Rivers in Case No. 2019-00435[1] in which the Company is seeking approval of its 2020 Environmental Compliance Plan, and authority to recover costs through a revised Environmental Surcharge (the "2020 ECP Case"). I also submitted testimony in support of the Joint Application filed by Big Rivers and Meade County Rural Electric Cooperative Corporation in Case No. 2019-00365,[2] which is presently pending before the Commission and involves a request for approval of contracts to provide electric service to a new facility to be developed by Nucor Corporation ("Nucor") in Brandenburg, Meade County, Kentucky. I

[1] *In the Matter of: Application of Big Rivers Electric Corporation for Approval of its 2020 Environmental Compliance Plan, Authority to Recover Costs Through a Revised Environmental Surcharge and Tariff, the Issuance of a Certificate of Public Convenience and Necessity for Certain Projects, and Appropriate Accounting and Other Relief* (filed Feb. 7, 2020).

[2] *In the Matter of: Electronic Joint Application of Big Rivers Electric Corporation and Meade County Rural Electric Cooperative Corporation for (1) Approval of Contracts for Electric Service with Nucor Corporation; and (2) Approval of Tariff* (filed Sept. 26, 2019).

have also testified on behalf of Big Rivers in Case No. 2019-00269[3] in which the Company requested that the Commission enforce the series of contracts between Big Rivers and the City of Henderson and the City of Henderson Utility Commission (collectively, "HMP&L") related to the William L. Newman Station Two ("Station Two") generating plant and associated facilities, and in Case No. 2018-00146,[4] in which the Commission found, among other things, that various Station Two contracts had terminated.

I have also testified on behalf of Duke Energy Kentucky, Inc., including in Case No. 2006-00172,[5] in which Duke sought an increase in rates, and in Case No. 2008-00495,[6] in which Duke sought approval of energy efficiency programs and an energy efficiency rider. Additionally, I have testified before The Public Utilities Commission of Ohio, the Indiana Utility Regulatory Commission, and FERC. My professional experience is summarized in Exhibit Smith-1.

[3] *In the Matter of: Application of Big Rivers Electric Corporation for Enforcement of Rate and Service Standards* (filed July 31, 2019).

[4] *In the Matter of: Notice of Termination of Contracts and Application of Big Rivers Electric Corporation for a Declaratory Order and for Authority to Establish a Regulatory Asset* (Ky. P.S.C. Aug. 29, 2018).

[5] *An Adjustment of the Electric Rates of the Union Light, Heat and Power Company D/B/A Duke Energy Kentucky, Inc.* (Ky. P.S.C. Dec. 21, 2006).

[6] *In the Matter of: Application of Duke Energy Kentucky, Inc. for Approval of Energy Efficiency Plan including an Energy Efficiency Rider and Portfolio of Energy Efficiency Programs* (Ky. P.S.C. Jan. 29, 2010).

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to provide detailed discussion of the financial and accounting aspects of Big Rivers' proposals in this proceeding, to describe Big Rivers' proposals with respect to existing and proposed regulatory assets, including the prudent amortization and recovery of the regulatory assets related to the lost smelter load over a term no longer than the "all-requirements" contracts with Big Rivers' Members, which terminate on December 31, 2043, and the proposed establishment of a "New TIER Credit" that will provide long-term and short-term benefits to Members, including bill credits that will flow through a revised Member Rate Stability Mechanism ("MRSM") Rider.

Big Rivers' request to recover its regulatory assets, and to establish the proposed New TIER Credit, including the revisions to the MRSM Rider to allow bill credits to Members without requesting an increase in base rates, is the result of Big Rivers' aggressive pursuit of its Load Concentration Analysis and Mitigation Plan (the "Load Mitigation Plan"). The robust and successful execution of the Load Mitigation Plan allows Big Rivers to share its hard-fought successes with its Members through the relief requested in this proceeding. The relief requested in this proceeding is expected to provide the short-term benefit of a monthly bill credit through the New TIER Credit and a long-term benefit of accelerated recovery of Big Rivers' regulatory assets, without seeking to increase Big Rivers' base rates. Additionally, Big Rivers

expects that this relief will result in regaining its investment grade credit rating, which will reduce Big Rivers' cost of credit, further benefiting Big Rivers' Members.

Additionally, my testimony will address Big Rivers' requirement to file an updated depreciation study and to modify its fuel stacking allocation methodology.

Q. Are you sponsoring any exhibits?

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

- Exhibit Smith-1: Professional Summary
- Exhibit Smith-2: Big Rivers' Request Letter to RUS
- Exhibit Smith-3: Current MRSM/Billing Formats on File
- Exhibit Smith-4: Proposed MRSM/Billing Formats
- Exhibit Smith-5: Redline of Current MRSM/Billing Formats
- Exhibit Smith-6: Member Bill Impact Statement
- Exhibit Smith-7: Illustrative Regulatory Asset Amortization Schedule

II. REQUESTED RELIEF

A. THE COMMISSION SHOULD ALLOW BIG RIVERS TO ESTABLISH REGULATORY ASSETS FOR THE REMAINING NET BOOK VALUE OF THE COLEMAN STATION AND REID

STATION UNIT 1 AND OTHER COSTS SUCH AS DECOMMISSIONING THESE FACILITIES.

Q. What regulatory assets does Big Rivers seek to establish as a result of the retirement of the Coleman Station and Reid Station Unit 1?

A. Subject to Rural Utilities Service ("RUS") approval, Big Rivers seeks to establish a regulatory asset to defer expenses it incurs relating to the retirement of Coleman Station, including but not limited to the remaining unrecovered net book value of that facility at the time of retirement, which Big Rivers would otherwise have to write-off, as well as other incurred costs such as the costs of consultants, legal costs, and decommissioning costs (the "Coleman Station Regulatory Asset"). Likewise, subject to RUS approval, Big Rivers seeks to establish a regulatory asset to defer expenses it incurs relating to the retirement of Reid Station Unit 1, including but not limited to the remaining unrecovered net book value of that facility at the time of retirement, which Big Rivers would otherwise have to write-off, as well as other incurred costs such as the costs of consultants, legal costs, and decommissioning costs (the "Reid Station Unit 1 Regulatory Asset").

Q. What is the anticipated value of the proposed Coleman Station Regulatory Asset?

A. The remaining net book value of the Coleman Station as of December 31, 2019 is approximately $140.4 million. However, as requested in the 2020 ECP Case,

Big Rivers seeks to move the horizontal flue gas desulfurization ("FGD") system at Coleman Station to the Wilson Station, which will reduce the unrecovered net book value of the Coleman Station by approximately $23.3 million. Thus, Big Rivers expects that the total value of the regulatory asset for the unrecovered net book value of the Coleman Station will be approximately $117.1 million. Additionally, Big Rivers will incur additional costs, such as decommissioning. Big Rivers anticipates such other costs will be minimal as a result of Big Rivers' plans to mitigate the actual costs by offsetting those costs with amounts earned through sales of the marketable assets and scrap value at the Coleman Station.

Q. What is the anticipated value of the proposed Reid Station Unit 1 Regulatory Asset?

A. The remaining net book value of Reid Station Unit 1 as of December 31, 2019 is approximately $6 million. Additionally, Big Rivers will incur additional costs, such as decommissioning. Big Rivers anticipates such costs will be minimal as a result of planned efforts to mitigate the actual costs by offsetting those costs with amounts earned through sales of its marketable assets and its scrap value.

Q. Has Big Rivers' sought approval from RUS to establish the regulatory assets related to the retirement of Coleman Station and Reid Station Unit 1?

A. Yes. On December 20, 2019, Big Rivers sought approval from RUS to establish a regulatory asset related to the retirement of Coleman Station and Reid Station Unit 1, including the unrecovered net book value of those generating stations and the actual costs incurred relating to their retirement, such as decommissioning costs.[7] Since sending its request letter to RUS, Big Rivers has been in frequent communication with RUS regarding its requested approval of the regulatory assets related to the retirement of the Coleman Station and Reid Station Unit 1. Based on these communications, Big Rivers expects RUS action during the pendency of this proceeding. Big Rivers will provide the Commission with a copy of RUS's decision regarding establishment of regulatory assets related to the Coleman Station and Reid Station Unit 1 once it is received.

In light of Big Rivers' need for an expedited ruling in this proceeding, rather than continue to delay filing of its application in this proceeding, Big Rivers requests that the Commission's approval for Big Rivers to establish the Coleman Station and Reid Station Unit 1 Regulatory Assets be granted subject to RUS approval. Big Rivers believes this will allow the Commission time to

[7] Exhibit Smith-2, Big Rivers' Request Letter to RUS.

issue a final order in this proceeding without jeopardizing Big Rivers' ability to take advantage of its potential investment grade credit ratings at the time it issues new debt as early as July 2020, which will benefit Big Rivers' Members.

Q. Will the retirement of the Coleman Station and Reid Station Unit 1 result in cost savings to Big Rivers?

A. Yes. Due to the loss of the smelter load, Big Rivers no longer needs these generation stations to meet the energy demands of its anticipated load. Continuing to incur maintenance expenses (however limited) related to these stations would not be prudent, and retirement now will limit the continued expense of maintaining these stations. Moreover, retiring these stations now will allow Big Rivers to start the decommissioning process, which it would do at the time of retirement – whether now or at some point in the future. Beginning that process now will allow Big Rivers the greatest opportunity to fully mitigate the costs of decommissioning by attempting to sell the remaining marketable assets at Coleman Station and Reid Station Unit 1 at their highest value. Indeed, the merits of this decision – and the respective cost savings – are highlighted by Big Rivers' request to move the FGD system at Coleman Station to the Wilson Station in its pending 2020 ECP Case.

In fact, in relation to the recent Station Two retirement addressed in Case No. 2019-00269, Big Rivers engaged Burns & McDonnell to assist it in

evaluating the prudent decommissioning of Station Two. Based on Burns & McDonnell's experience, it advised that retirement-in-place is not a cost-effective alternative to full demolition of a generation station in light of continued carrying costs (maintaining operation of Federal Aviation Administration warning lights, insurance, permits, and monitoring and maintenance, for example) and the fact that the structures will be required to be torn down at a future date anyway.[8] Based on this advice, Big Rivers believes it is prudent to expend the unavoidable decommissioning costs for Coleman Station and Reid Station Unit 1 now. These assets will provide no further benefit to Big Rivers' Members after their retirement. Similarly, there is no benefit to incurring carrying costs in order to delay decommissioning costs that are likely to be higher in the future as a simple matter of inflation.

In sum, Big Rivers would seek recovery of its prudent capital investment in these generation stations at some point in time, and the decision to retire the stations now – instead of some date in the future – will result in cost savings to Big Rivers because it can attempt to recover the highest possible value for the remaining marketable assets at Coleman Station and Reid Station Unit 1, while simultaneously avoiding the continued (albeit limited) maintenance expenses associated with idling these generation stations.

[8] *See In the Matter of: Application of Big Rivers Electric Corporation for Enforcement of Rate and Service Standards*, Direct Testimony of Jeffery T. Kopp, Case No. 2019-00269 (July 31, 2019), at 8, 9.

Furthermore, as to Reid Station Unit 1 in particular, significant costs would be required to bring Reid Station Unit 1 into compliance with MATS, so avoiding these costs for unnecessary generation capacity will result in additional savings.

B. THE COMMISSION SHOULD ALLOW BIG RIVERS TO AMORTIZE AND RECOVER THE REGULATORY ASSETS THAT WERE ESTABLISHED AS A RESULT OF BIG RIVERS' EFFORTS TO MITIGATE THE LOSS OF THE SMELTER LOAD.

Q. What regulatory assets does Big Rivers seek approval to recover in this proceeding?

A. As part of Big Rivers' efforts to regain its investment grade credit rating, Big Rivers seeks the Commission's approval to recover the regulatory assets established subsequent to, and as a result of the departure of the smelters and the execution of the Load Mitigation Plan, as well as the expenses of the Focused Management Audit, less the regulatory liability Big Rivers established relating to demand-side management spending (the "DSM Regulatory Liability") and the 2019 Station Two TIER Credit, and after the utilization of Member equity as proposed in this proceeding. Such regulatory asset accounts (hereinafter, the "Smelter Loss Mitigation Regulatory Assets"[9]), and the applicable balances as of December 31, 2019, include the following:

[9] Collectively, the "Smelter Loss Mitigation Regulatory Assets" include the regulatory assets previously established for the Station Two Retirement Costs, Coleman Station Depreciation Deferral, and Wilson Station Depreciation Deferral; the Focused Management Audit Expenses incurred, and for which recovery is authorized by KRS 278.255(3); and the regulatory assets sought to be established in this proceeding for the unrecovered net book value and the decommissioning costs of the Coleman Station and the Reid Station Unit 1.

Description	12/31/19 Balance
Station Two Retirement Costs	$90.4 million
Coleman Station Regulatory Asset	$117.1 million[10]
Coleman Station Depreciation Deferral	$37.2 million
Reid Station Unit 1 Regulatory Asset	$6 million[11]
Wilson Station Depreciation Deferral	$120.5 million
Focused Management Audit Expenses	$0.7 million
Subtotal	$371.9 million
Less: 2019 Station Two TIER Credit	$27.7 million
Less: Member Equity Utilization	$91 million[12]
Less: 2019 Demand-Side Management Liability	$0.7 million
Total as of 12/31/19	$252.5 million

[10] The approximate value of the Coleman Station Regulatory Asset assumes the Commission approves Big Rivers' request to move the FGD system from the Coleman Station to the Wilson Station, and does not include any additional costs, such as costs related to decommissioning, as those costs have yet to be incurred.

[11] The approximate value of the Reid Station Unit 1 Regulatory Asset does not include any additional costs, such as costs related to decommissioning, as those costs have yet to be incurred.

[12] The Member Equity Utilization will not be recorded until 2021, but Big Rivers includes it in this table to more accurately approximate the value of the regulatory assets that Big Rivers proposes to recover through amortization beginning in calendar year 2021.

Q. As referenced in the Settlement Agreement in Case No. 2018-00146, did Big Rivers achieve 2019 net margins in excess of a 1.45 times interest earned ratio ("TIER") and apply the 2019 Station Two TIER Credit?

A. Yes. Big Rivers' preliminary financial results for calendar year 2019 reflect net margins of $44.5 million, which equates to a 2.20 TIER. Based on these results, Big Rivers has reduced the December 31, 2019 Smelter Loss Mitigation Regulatory Asset balance by $27.7 million. I note that these financial results are subject to an ongoing external audit to be completed by April 30, 2020, and the applicable 2019 Station Two TIER Credit could be impacted by any audit adjustments.

Q. As referenced in the Settlement Agreement in Case No. 2018-00146, has Big Rivers recorded a reduction in the Smelter Loss Mitigation Regulatory Asset balance as of December 31, 2019 to reflect the prudent utilization of its member equity?

A. No, not yet. As further discussed in the Testimony of Robert W. Berry, Big Rivers is proposing to record a one-time additional amortization expense equivalent to 80% of the equity headroom required by the syndicated bank facility, or an estimated approximately $91 million, in 2021.

Q. Over what period of time is Big Rivers seeking approval to amortize the Smelter Loss Mitigation Regulatory Assets?

A. Big Rivers proposes to amortize the Smelter Loss Mitigation Regulatory Assets over a period "no longer than" the remaining term of the Member Contracts, which is December 31, 2043. This amortization term will allow Big Rivers to: (1) minimize the rates charged to its Members; (2) avoid the need to seek a short-term increase in base rates in order to maintain adequate financial and debt coverage metrics; (3) ensure that all expenditures that have allowed Big Rivers to provide reliable and cost-effective electric energy to its Members are fully recovered prior to the expiration of the Members' all-requirements Contracts, thereby avoiding a stranded investment; and (4) provide certainty of recovery for historically prudent expenditures and thereby provide continued regulatory support that the rating agencies have described as critical to regaining an investment grade credit rating.

Big Rivers seeks permission to amortize over a period "no longer than" the term of the Members' Contracts because Big Rivers is optimistic that the regulatory assets will be fully amortized prior to December 31, 2043 through operation of the "New TIER Credit"[13] that Big Rivers seeks to establish in this proceeding, the operation of which is fully explained in my testimony below.

[13] Because the TIER Credit Big Rivers seeks to implement through this proceeding will replace the existing TIER Credit in its entirety, Big Rivers refers to the TIER Credit mechanism proposed in this proceeding as the "New TIER Credit."

Q. What amortization schedule is Big Rivers proposing to apply to the Smelter Loss Mitigation Regulatory Assets?

A. Big Rivers will apply a levelized amortization schedule to the Smelter Loss Mitigation Regulatory Assets, which will result in the Smelter Loss Mitigation Regulatory Assets being projected to be amortized in an equal amount annually from 2021 to 2043. For example, the proposed Coleman Station Regulatory Asset has an approximate balance of $117.1 million as of December 31, 2019.[14] If the Commission approves the relief requested herein, Big Rivers proposes to amortize this asset by approximately $5.1 million annually from the beginning of 2021 through the end of 2043 ($117,100,000 / 23 years = $5.1 million amortization expense per year).

For any future expenses, Big Rivers will also apply a levelized amortization schedule, but those expenses will simply be amortized in an equal amount from the year incurred to 2043. For example, if Big Rivers incurred $100,000 in decommissioning expenses for the Coleman Station with 10 years remaining on the term of the Member Contracts, those expenses would be amortized by $10,000 annually from 2034 through 2043 ($100,000 / 10 years = $10,000 amortization expense per year).

[14] This approximate balance as of December 31, 2019 assumes Commission approval of the transfer of the FGD System from the Coleman Station to the Wilson Station.

C. THE COMMISSION SHOULD ALLOW BIG RIVERS TO ESTABLISH THE NEW TIER CREDIT AND AMEND THE MRSM RIDER.

Q. What is the purpose of the New TIER Credit?

A. The purpose of the New TIER Credit is to provide both a short- and long-term benefit to Big Rivers' Members as a result of the aggressive and successful achievement of the Load Mitigation Plan. Big Rivers' Members will recognize a short-term benefit in the form of a Monthly Bill Credit, while simultaneously receiving a long-term benefit in the form of a reduction in the current amount of the Smelter Loss Mitigation Regulatory Assets, thereby reducing the balance of regulatory assets to be recovered in the future. Moreover, not only is Big Rivers hopeful that the New TIER Credit will effectively reduce base rates and diminish the chance of rate increases in the future, but authorization to recover Big Rivers' regulatory assets has been identified by the credit rating agencies as one final hurdle in Big Rivers' efforts to regain an investment grade credit rating, which could lead to additional benefits to Big Rivers' Members through lower borrowing costs to Big Rivers as well as eliminating the need for Big Rivers to provide credit support in certain transactions.[15]

[15] The current MRSM and billing formats is attached as Exhibit Smith-3.

Q. How is the New TIER Credit proposed to be calculated?

A. The New TIER Credit will be calculated on an annual basis at the time Big Rivers completes its year-end financial statements. For each calendar year, Big Rivers will calculate its TIER, which equals (Net Margins + Interest Expense on Long Term Debt) / Interest Expense on Long Term Debt. As is typical in base rate applications, Big Rivers will exclude all "promotional advertising, political advertising or institutional advertising" expenditures as those terms are defined in 807 KAR 5:016, lobbying costs, and donations (the "Regulatory Exclusions") from its Net Margins calculation.

For each year in which Big Rivers' TIER (calculated as just described) is in excess of 1.30, Big Rivers will provide its Members a monthly bill credit through the MRSM over the twelve months following the close of the books for that year equal to one-half of the amount of Big Rivers' adjusted net margins above a 1.30 TIER (the "Monthly Bill Credit"). The remaining one-half of the margins over a 1.30 TIER will be utilized 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 would reduce the amortization expense of the Smelter Loss Mitigation Regulatory Assets to bring its TIER to 1.30. In such year, Big Rivers will not provide the Monthly Bill Credit in the following year.[16]

[16] The proposed MRSM and billing formats is attached as Exhibit Smith-4.

Q. How will the New TIER Credit be allocated among Big Rivers' Members?

A. Following any year in which a New TIER Credit is due, Big Rivers will apply fifty-percent of the net margins above a 1.30 TIER in the form of the Monthly Bill Credit. The Monthly Bill Credit for the following twelve-month period will be allocated to the Rural Class and the Large Industrial Class in the same proportion as each class contributed to Member revenues during the prior calendar year, excluding revenue applicable to sales under an economic development rate ("EDR") as well as sales to which Big Rivers' Fuel Adjustment Clause is inapplicable.

When returning the Monthly Bill Credit earned from the prior year's revenues, the credit each month within the Rural Class and the Large Industrial Class will be applied to each Member's bill based on kWh sales within the respective Rural and Large Industrial class, excluding sales under an EDR and sales to which Big Rivers' Fuel Adjustment Clause is inapplicable.

The remaining fifty-percent of the net margins above a 1.30 TIER will be applied to increase amortization expense on the Smelter Loss Mitigation Regulatory Assets, thereby further decreasing the total balance of the Smelter Loss Mitigation Regulatory Assets.

If the Smelter Loss Mitigation Regulatory Assets are fully amortized prior to December 31, 2043, Big Rivers will then apply one-hundred percent of the New TIER Credit to the Monthly Bill Credit.[17]

Q. Why will the monthly credit under the New TIER Credit not apply to customers served under an EDR or a rate to which Big Rivers' Fuel Adjustment Clause is inapplicable?

A. Big Rivers' EDR provides a 90% reduction in demand charges for retail customers served under that rate. In other words, customers served under the EDR initially contribute very little to cover the fixed expenses included in Big Rivers' base rates. As such, these customers would not have contributed to achieving surplus margins, and therefore it is appropriate that these customers not receive the credit. Further, while those retail customers will not receive any monthly credits, retail customers operating under an EDR will still be benefited by the New TIER Credit through amortization of the regulatory assets, as this will decrease the risk that Big Rivers would need to seek a rate increase in the future, including an increase to the EDR.

Likewise, there are certain rates Big Rivers charges its Members to which Big Rivers' Fuel Adjustment Clause does not apply. Such rates could include special negotiated contract rates and backup power rates for customers

[17] A redline of the current MRSM and billing formats is attached as Exhibit Smith-5.

with cogeneration facilities. Because these customers are not paying the standard tariff riders, such as the Fuel Adjustment Clause, they should also not benefit from tariff riders like the MRSM.

Q. How many retail customers are currently served under an EDR or a rate to which Big Rivers' Fuel Adjustment Clause is inapplicable?

A. The only retail customer on the Big Rivers system currently served under an EDR is Aleris Rolled Products Manufacturing, Inc. ("Aleris"). Aleris' EDR only applies to its load resulting from a recent expansion of its Lewisport facility. As such, Aleris' load served under the EDR is ineligible to receive the Monthly Bill Credit, but Aleris will receive a Monthly Bill Credit for its base load prior to the expansion, which is served under Big Rivers' LIC rate schedule.

Additionally, Domtar Paper Company, LLC ("Domtar") has a cogeneration facility and receives backup power at market-based rates under a special contract with Kenergy. Nucor Corporation has a special contract rate currently pending before the Commission. If approved, Nucor could begin being served by Big Rivers as early as [redacted]. For purposes of the New TIER Credit, sales to Kenergy for backup power to Domtar and sales to Meade County RECC for service to Nucor, [redacted], would not be eligible for the monthly credit that is flowed through the MRSM Rider.

Q. Can you provide a hypothetical illustration of how the New TIER Credit will operate when the TIER is above 1.30?

A. To illustrate, assume a 1.30 TIER equates to net margins of $10 million. If the net margins, after excluding the Regulatory Exclusions from the TIER calculation, total $15 million, the excess net margins subject to the New TIER Credit are $5 million ($15 million - $10 million). The $5 million New TIER Credit will be split in half. One-half ($2.5 million) will be divided into twelve equal parts, and those twelve equal parts will be the Monthly Bill Credit over the following twelve months.

The twelve equal bill credits will be allocated to the Rural Class and Large Industrial Class in proportion to the amount each class contributed to revenues during the prior calendar year, and then applied to Member bills based on kWh usage. Thus, continuing the example above, the equal monthly bill credits would equal approximately $208,333.00 ($2.5 million / 12 months). If the Rural Class contributed 70% of the revenues for the prior calendar year, approximately $145,833 ($208,333.00 x 70%) each month would be returned to the Rural Class, with that amount being credited to the Members based upon the applicable kWh sales in the Rural Class to each Member in the applicable month. The remaining 30% of the credit would be distributed to the Large Industrial Class each month, based upon the applicable kWh sales in the Large Industrial Class to each Member in the applicable month.

The other half ($2.5 million) will be applied as an additional amortization of the Smelter Loss Mitigation Regulatory Asset balances, thereby accelerating the reduction of the Smelter Loss Mitigation Regulatory Asset balances.

Q. How will the New TIER Credit operate if the TIER is below 1.30?

A. Following any calendar year in which Big Rivers does not achieve a 1.30 TIER, Big Rivers' Members will not receive the Monthly Bill Credit. Amortization of the Smelter Loss Mitigation Regulatory Assets will continue; it will just be temporarily reduced by an amount equivalent to the total that would be needed to achieve a 1.30 TIER.

Q. Can you provide a hypothetical illustration of how the New TIER Credit will operate when the TIER is below 1.30?

A. To illustrate, assume again that a 1.30 TIER equates to net margins of $10 million. If the net margins, after excluding the Regulatory Exclusions from the TIER calculation, total $9 million, the net margin deficiency is $1 million ($9 million - $10 million). Because the net margins are below the 1.30 TIER, no Monthly Bill Credit would be applied. However, because the net margin deficiency is $1 million, the amortization expense applied to the Smelter Loss Mitigation Regulatory Assets for the current year will be reduced by $1 million.

Q. How was the 1.30 TIER threshold determined for the New TIER Credit?

A. As the Commission is aware, a 1.30 TIER was the TIER approved by the Commission in Big Rivers' last rate case.[18] Based upon Big Rivers' current financial position and its credit agreements, Big Rivers believes that applying the TIER Credit to net margins above 1.30 is a reasonable threshold because it will allow Big Rivers to recover the Smelter Loss Mitigation Regulatory Assets and to continue improving its financial stability, without causing the need for a base rate increase.

Furthermore, retaining earnings at a 1.30 TIER will ensure Big Rivers is able to maintain its financial position in a way that will allow Big Rivers to maintain adequate operating capital, as well as attract adequate capital at a reasonable cost, in order to maintain physical plants, to meet its service obligations, to ensure it has adequate cash on hand to cover any unexpected expenses, and to maintain compliance with its debt covenants.

For example, as was true in Big Rivers' last rate case, Big Rivers' credit agreements still require Big Rivers to achieve a minimum 1.10 Margins for Interest Ratio ("MFIR"). If Big Rivers fails to achieve the minimum MFIR requirement, it faces potentially significant consequences under its credit

[18] *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. 2013-000199 (Apr. 25, 2014), at 32 ("We find that a TIER of 1.30X is reasonable and appropriate at this time. . . .").

agreements that include paying higher interest rates on debt, losing the contractual ability to borrow money on a secured basis, having its existing loans accelerated, having its lines of credit terminated, and having its ability to obtain letters of credit under its existing credit agreements terminated. Thus, applying the TIER Credit based upon a 1.30 threshold provides a small buffer against unexpected circumstances to help ensure that Big Rivers maintains necessary capital and equity to meet the requirements imposed by its creditors. It also helps avoid a scenario where Big Rivers fails to achieve the minimum MFIR requirement and thereby finds it difficult, if not impossible, to access the credit markets for the capital needed to effectively meet its public service obligations.

Q. Is Big Rivers' forecasting that it will earn in excess of a 1.30 TIER under the New TIER Credit in the coming years?

A. Yes. Big Rivers' financial forecast reflects the following estimated TIER projections:

Year	TIER Projection
2020	[redacted]
2021	
2022	

2023	[redacted]

Q. How will the New TIER Credit affect Big Rivers' base rates?

A. As is illustrated by Exhibits Smith-6 and Smith-7, implementation of the New TIER Credit is expected to result in Big Rivers' Members seeing an effective reduction in rates in 2021, and is also projected to provide long-term benefits – stabilization of base rates, with the opportunity to earn the Monthly Bill Credit, all while recovering the Smelter Loss Mitigation Regulatory Assets. While it is possible that in some years the proposed MRSM tariff may result in a smaller monthly credit than what would be provided under the existing MRSM tariff, when considering the base rate increase that would be required to recover the Smelter Loss Mitigation Regulatory Assets through base rates, Big Rivers' believes this proposal best serves its Members because it allows Big Rivers to recover the Smelter Loss Mitigation Regulatory Assets while stabilizing base rates for the foreseeable future – and offering Big Rivers' Members an opportunity to continue being provided an effective base rate reduction through the Monthly Bill Credit.

Q. Will the upgrade of Big Rivers' credit rating affect the projected TIER calculation and the resulting monthly credit benefit to Members?

A. Yes. Achieving a credit upgrade will reduce Big Rivers' cost of debt. As a result, Big Rivers will enjoy a reduction in its annual interest expense. By reducing its annual interest expense, the net margin threshold to achieve a TIER of 1.30 will be reduced. Accordingly, Members will enjoy an enhanced New TIER Credit benefit equivalent to 1.30 times the reduced annual interest expense.

Q. How do the New TIER Credit and the revisions to the MRSM Rider differ from Big Rivers' current MRSM Rider?

A. The New TIER Credit and proposed revisions to the MRSM Rider will offer Big Rivers' Members a simple, easy-to-understand mechanism that returns to them the benefits of Big Rivers' successful implementation of the Load Mitigation Plan. The current MRSM Rider contains a multitude of accounts, allocated in various manners that are designed to return a portion of the margins on sales to the Nebraska entities, transmission revenues received from the Hawesville smelter, and the depreciation expense savings resulting from the termination of the Station Two Contracts. In addition, pursuant to the TIER Credit established by the Settlement Agreement in the Station Two Case (the "Station Two TIER Credit"), which is based on a 1.45 TIER threshold, savings resulting from the termination of the Station Two Contracts are utilized to reduce the balance of the Smelter Loss Mitigation Regulatory

Assets. The New TIER Credit replaces the Station Two TIER Credit and the various, complicated accounts in the current MRSM Rider, in favor of a simplified MRSM Rider that accounts for all revenues in the same manner.

In the further interest of simplicity, Big Rivers is also proposing to stop accruing the Demand Side Management ("DSM") regulatory liability starting in 2020. Instead, Big Rivers proposes to treat these revenues like all other revenues, and they will simply become part of the net margin component of TIER that will be used to annually calculate the amount of any New TIER Credit.

For the DSM regulatory liability that was accrued through December 31, 2019 (approximately $700,000), Big Rivers proposes a one-time application of it to reduce the current balance of the Smelter Loss Mitigation Regulatory Assets, which will be applied upon Commission approval.

Q. Why does the revised MRSM Rider distinguish between the 2020 service year and the service years for 2021 and beyond?

A. The revised MRSM Rider is designed so that Big Rivers' Members have the opportunity to be provided a monthly bill credit from the date the Commission approves the revised MRSM Rider until Big Rivers' 2020 adjusted net margins above a 1.30 TIER begin flowing back to the Members through operation of the revised MRSM mechanism.

Through the December 2020 service month, the revised MRSM Rider will operate identically to Big Rivers' current MRSM Rider, which will allow Big Rivers' Members to continue being provided a monthly credit based on the transmission revenues from Century-Hawesville, as if no change had been made to the current MRSM Rider.

Then, beginning in the January 2021 service month, the revised MRSM Rider will shift to the new mechanism, which will begin distributing the Monthly Bill Credit based upon Big Rivers' 2020 Adjusted Net Margins.

This will allow Big Rivers' Members to be provided one continuous bill credit, the mechanics of which simply shift from the old MRSM mechanism to the new MRSM mechanism proposed herein. Without drafting the revised MRSM Rider to distinguish between the 2020 service year and service years 2021 and beyond, Big Rivers' Members would not have been provided a monthly bill credit from the date the Commission approved the revised MRSM Rider to the date the revised MRSM Rider began distributing the Monthly Bill Credit based upon Big Rivers' 2020 Adjusted Net Margins.

III. DEPRECIATION STUDY

Q. Did the Commission order Big Rivers to file an updated depreciation study?

A. Yes. In Case No. 2018-00313, the Commission granted in part Big Rivers' request for an extension of time to file a new depreciation study, and ordered that Big Rivers file a new depreciation study on or before June 1, 2020.[19]

Q. Has a new depreciation study been prepared for Big Rivers?

A. Yes. Big Rivers received an updated depreciation study in December 2019 (the "2019 Depreciation Study"), and has filed it with the Commission in this proceeding as Exhibit C to the Application, in compliance with the Commission's Order in Case No. 2018-00313.

Q. Who prepared the 2019 Depreciation Study?

A. The 2019 Depreciation Study was prepared by Alliance Consulting Group at Big Rivers' request. I have reviewed the depreciation study in my capacity as CFO of Big Rivers.

[19] *See In the Matter of: Motion of Big Rivers Electric Corporation for an Extension of Time to File a New Depreciation Study*, Order, Ky. P.S.C. Case No. 2018-00313 (Dec. 14, 2013), at 2.

Q. When was the last depreciation rate study completed for Big Rivers?

A. Big Rivers' last depreciation rate study was completed in November 2012 by Burns & McDonnell (the "2012 Depreciation Study") in connection with Big Rivers' 2012 rate case, Case No. 2012-000535, and utilized again in Big Rivers' 2013 rate case, Case No. 2013-00199.

Q. What was the scope and purpose of the 2019 Depreciation Study?

A. The 2019 Depreciation Study was conducted to analyze the service life characteristics, net salvage indications, and depreciation reserve status based on historical data from Big Rivers' Continuing Property Records ("CPR") system data, and then to derive depreciation rates for Big Rivers' system plant in service. The 2019 Depreciation Study excluded Station Two due to Station Two being retired on February 1, 2019.

Q. Describe the depreciation analysis.

A. The depreciation rate analysis was performed based on the electric generation, transmission, and general plant historical accounting records of Big Rivers as of December 31, 2018. The methodologies and basis for calculating the depreciation rates and completing the 2019 Depreciation Study are similar to the process utilized in Big River's 2012 Depreciation Study.

Q. What are the results of the study?

A. The depreciation rates in the study were developed for all of Big Rivers' generation, transmission, and general plant in service assets based on historical plant accounting records provided by Big Rivers' CPR system, other published depreciation survey information, and generally accepted depreciation analysis methodologies. Based upon this information, Alliance Consulting Group formulated estimates of the remaining useful service lives for each plant account.

Appendix A in the 2019 Depreciation Study presents depreciation rates, and Appendix B presents the remaining life estimates for each plant account balance of Big Rivers' in service production, transmission, and general plant as of December 31, 2018. These Appendices also provide a comparison calculation of Big Rivers' annual depreciation expense, calculated using the existing depreciation rates and the rates set forth in the study. This comparison shows that the study's depreciation rates, if implemented by Big Rivers, would result in an estimated decrease in annual depreciation expense of approximately $90,000 based on actual plant account balances as of December 31, 2018.

Q. Is Big Rivers seeking to implement the 2019 Depreciation Study's depreciation rates?

A. No. Big Rivers is not seeking to adjust its base rates in this proceeding. Accordingly, Big Rivers does not seek to implement the 2019 Depreciation Study rates. Slightly decreasing depreciation rates while leaving base rates unchanged would generally result in a slight over-earning situation. However, the change that would result if the 2019 Depreciation Study's depreciation expense were implemented is so small as to be insignificant, especially in light of the relief requested in this proceeding, which would allow Big Rivers to adequately recover its current expenses (including the recovery of the Smelter Loss Mitigation Regulatory Assets through amortization), without a base rate case while also crediting Members with half of excess margins through operation of the New TIER Credit and revised MRSM Rider. Consequently, Big Rivers does not believe an adjustment of its depreciation rates is appropriate at this time.

IV. FUEL STACKING CLAUSE

Q. Has the Commission recently ordered Big Rivers to revise its fuel costs allocation methodology?

A. Yes. In Case No. 2017-00287, Kentucky Industrial Utility Customers, Inc. ("KIUC") argued that Big Rivers' current fuel stacking methodology, which

uses the system-average fuel cost methodology, allocates an unreasonable fuel expense to Big Rivers' native load customers. Thus, KIUC requested that Big Rivers be required to allocate fuel costs between native load customers and off-system sales so that the lowest fuel expenses each hour would be allocated to Big Rivers' native load customers. However, the Commission determined that it was not proper to pursue such a change in a six-month fuel adjustment clause case; it ordered that the stacking methodology be changed in Big Rivers' next rate case or two-year fuel adjustment clause review.

Then, in Case No. 2019-00007, which was Big Rivers' two-year fuel adjustment clause review, Big Rivers and KIUC agreed that any change to the fuel stacking methodology should occur in Big Rivers' base rate case, and the Commission ordered Big Rivers to propose a change to its fuel cost allocation method in its next base rate case.

Q. Is Big Rivers proposing a change to its fuel cost allocation method in this proceeding?

A. No. As a technical matter, this is not a base rate case, which the Commission had ordered would need to address Big River's fuel cost allocation method. More to the point, however, a change to the requested fuel stacking methodology would no longer have a material effect on the rates charged to Big Rivers' native load customers and would not justify the effort required to implement that change at this time. More specifically, since KIUC initially

made its request for the Commission to require Big Rivers to switch stacking methodologies, the relatively higher-cost Station Two has ceased operation. Big Rivers now operates only two base load generating facilities: Wilson Station and Green Station. Because these two generating facilities have similar dispatch costs, KIUC's fuel stacking methodology would have negligible variance relative to the system-average fuel cost methodology currently reflected in Big Rivers' fuel adjustment clause filings and its base rates.

Accordingly, implementing the stacking changes requested by KIUC would have no material effect on the rates charged to Big Rivers' native load customers.

Q. Have you discussed the fuel stacking methodology issue with KIUC and does KIUC continue to agree that no change is required at this time?

A. Yes. I have discussed with KIUC the proposal to not alter the fuel stacking methodology, and it is my understanding that KIUC believes that no fuel stacking adjustment is needed at this time.

V. CONCLUSION

Q. What is your recommendation to the Commission in this case?

A. When the smelters announced that they planned to cease operations, the loss of over one-half of its Member load imposed a significant financial obstacle for Big Rivers. Many participants in Case Nos. 2012-00535 and 2013-00199, many industry observers, and all three credit rating agencies questioned Big Rivers' ability to avoid bankruptcy let alone remain financially viable. Despite these questions, and despite circumstances in which very few electric utilities could survive, Big Rivers resolutely pursued and successfully implemented its Load Mitigation Plan. The results of these efforts, which have been accomplished in less time than most or all observers thought possible, has placed Big Rivers in the hard-fought position of regaining its investment grade credit ratings, achieving financial stability, and fully recovering significant regulatory assets resulting from the departure of the smelters without requesting to increase Member base rates.

For the reasons described in my testimony and elsewhere throughout this filing, I recommend that the Commission approve all of the relief requested in the application, including declaring the Wilson Station "used and useful," establishment of the regulatory assets (subject to RUS approval), amortization and recovery of the Smelter Loss Mitigation Regulatory Assets, and approval of the revisions to Big Rivers' MRSM tariff.

Q. Does this conclude your testimony?

A. Yes.

BIG RIVERS ELECTRIC CORPORATION

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. 2020-00_____

VERIFICATION

I, Paul G. Smith, 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

Paul G. Smith

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Paul G. Smith on this the 27th day of February, 2020.

Notary Public, Kentucky State at Large
My Commission Expires October 31, 2020

Professional Summary

Paul G. Smith
Vice President and Chief Financial Officer
Big Rivers Electric Corporation
201 Third Street
Henderson, KY 42420
Phone: 270-844-6194

Professional Experience

Big Rivers Electric Corporation
Vice President and Chief Financial Officer – 2018 to present

NextEra Energy Transmission
Senior Director Business Management – 2012-2018

Duke Energy
Vice President Retail Marketing – 2010-2011
Vice President Rates – 2006-2009
General Manager Budgets & Forecasts – 2001-2005
Manager UK Distribution Price Control – 1998-2000
Manager Revenue Requirements – 1996-1997
Various Financial Positions of increasing responsibility – 1987-1995

Crowe, Chizek & Co (CPA) – 1984-1986

Touche, Ross & Co (CPA) – 1982 - 1983

Education

Master of Business Administration
University of Chicago

Bachelor of Science Industrial Management (Computer Science Minor)
Purdue University

Case No. 2020-00_____

Exhibit Smith–2

Big Rivers Request for RUS Approval

Big Rivers
ELECTRIC CORPORATION

201 Third Street
P.O. Box 24
Henderson, KY 42419-0024
270-827-2561
www.bigrivers.com

December 20, 2019

USDA Rural Development
Rural Utilities Service
STOP 1522, Rm 5159
1400 Independence Ave., SW
Washington, DC 20250-1522
Attention: Assistant Administrator, Program Accounting and Regulatory Analysis

Re: Big Rivers Electric Corporation – Request for RUS Approval to Establish Regulatory Assets for Retirement of Coleman Station, and Reid Unit 1

Dear Assistant Administrator:

Big Rivers Electric Corporation ("Big Rivers") requests RUS approval to defer the recognition of certain expenses that it expects to incur as a result of the retirement of Coleman Units 1, 2, & 3 (collectively, "Coleman Station") and Reid Unit 1.

At the present time, Big Rivers has on its books approximately $145 million relating to the value of Coleman Station, and approximately $8 million relating to the value of Reid Unit 1. Under the current Rural Development USoA, upon retirement of the units, Big Rivers will have to recognize a loss on the retirement. This would result in a significant reduction in Big Rivers' equity.

In order to avoid this reduction in equity, Big Rivers intends to request from the Kentucky Public Service Commission ("KPSC") recovery of this amount. Big Rivers hereby requests the authority to depart from the prescribed Rural Development USoA by establishing a regulatory account to defer these costs. This departure will result in significant benefits to Big Rivers and its Member-Owners, by allowing Big Rivers to maintain stronger equity levels which will aid it in reestablishing investment grade credit ratings.

In the event RUS approval is obtained to establish the regulatory account as set forth above, Big Rivers would record the following amounts upon retirement of the units to a 182.2 - Unrecovered Plant and Regulatory Study Costs account, until such time as the KPSC issues an order either allowing or disallowing Big Rivers' request to record the costs in regulatory account(s):

1. Big Rivers' remaining net book value for Coleman Station and Reid Unit 1 assets as of October 31, 2019, approximately $145 million and $8 million, respectively, for a total of $153 million (details contained in Attachment A);

2. Decommissioning costs, if any; and

3. Other reasonable costs and obligations incurred related to Coleman Station and Reid Unit 1.

Big Rivers is currently recovering depreciation on the Reid Unit 1 asset mentioned above through rates. Big Rivers is not currently recovering depreciation on the Coleman Station assets through rates pursuant to the KPSC's final order in the last general base rate case, Case No. 2013-00199. In that case, Big Rivers was ordered by the KPSC to record depreciation on Coleman Station's assets in a regulatory asset. Big Rivers anticipates requesting recovery of the regulatory assets requested in this notice in an accounting and/or tariff application, or in its next general base rate case.

Big Rivers will request approval from the KPSC to record the costs in the regulatory account(s) for future rate recovery, and will request approval to recover these amounts through rates. Upon approval by the KPSC to establish the regulatory account(s), Big Rivers will make the appropriate accounting entries as outlined in Attachment B.

Big Rivers Board of Directors has authorized this action by Resolution on December 20, 2019. A copy of the resolution is attached as Attachment C.

Big Rivers respectfully requests expedited treatment of this matter. Pursuant to CFR 1767.13, Big Rivers is required to receive RUS approval before applying with the KPSC for establishment of regulatory accounts. Because retirement of Coleman Station and Reid Unit 1 are in the best interest of our Member-Owners here in rural Kentucky, we respectfully request that the RUS provide us written approval to establish the requested regulatory accounts within 30 days to allow us time to request the same from the KPSC no later than February 29, 2020.

In the event you need any further information on this request, please do not hesitate to contact me. Thank you for your assistance.

Sincerely,

Paul Smith, CPA
Chief Financial Officer
Big Rivers Electric Corporation

Attachment A
Big Rivers Electric Corporation
Coleman Station and Reid Unit 1 NBV
as of October 31, 2019

Coleman Station

Account	Description	NBV at 10/31/2019
10103102	LAND	1,124,664.82
10103112	STRUCTURES	1,378,904.17
10103122	BOILER PLANT EQUIPMNT	37,951,123.98
1010312C	ENVIRONMTL COMPLIANCE	89,677,270.57
1010312M	ENVIRONMTL COMPL-SHORT LIFE	-
1010312W	BOILER PLANT-SHORT LIFE	(3,937.95)
10103142	TURBOGENERATOR UNITS	11,236,591.49
10103152	ACCESS ELECTRIC EQUIP	2,662,024.01
10103162	MISC POWER PLANT EQUIP	892,940.46
Coleman-TOTAL		**144,919,581.55**

Reid Unit 1

Account	Description	NBV at 10/31/2019
10103101	LAND	83,342.47
10103111	STRUCTURES	(970.15)
10103116	STRUCTURES-R/HMPL	377,854.15
10103117	STRUCTURES-R/G/HMPL	91,166.01
10103121	BOILER PLANT EQUIPMNT	1,010,104.89
10103126	BOILER PLANT-R/HMPL	1,419,593.37
1010312B	ENVIRONMTL COMPLIANCE	2,217,486.94
1010312G	ENVIRON COMPL-R/HMPL	427,052.34
1010312L	ENVIRONMTL COMPL-SHORT LIFE	-
1010312U	BOILER-SHORT LIFE R/HMPL	(357.60)
1010312V	BOILER PLANT-SHORT LIFE	4,240.47
10103127	BOILER PLT-R/G/HMPL	50,069.60
10103141	TURBOGENERATOR UNITS	48,083.28
10103146	TURBINE PLT-R/HMPL	1,051,537.60
10103147	TURBINE PLT-R/G/HMPL	1,980.72
10103151	ACCESS ELECTRIC EQUIP	535,621.02
10103156	COMMON FOR REID & STATION II	51,530.09
10103157	ACCESS ELECTRIC EQUIP-R/G/HMPL	6,484.67
10103161	POWER PLANT EQUIPMENT	12,559.70
10103166	COMMON PLANT-R/HMPL	190,388.27
10103167	COMMON PLANT-R/G/HMPL	17,798.25
10103916	OFFICE FURN & EQUIP-R/HMPL	1,808.81
10103917	OFFICE FURN & EQUIP-R/G/HMPL	-
10103986	MISC EQUIP-R/HMPL	-
10103987	MISC EQUIP-R/G/HMPL	46.44
Reid-TOTAL		**7,597,421.34**

Attachment B

Big Rivers Electric Corporation

Proposed Accounting Entries Related to Retirement of Coleman Station and Reid Unit 1
(Using Utility Plant Net Book Values as of 10/31/2019)
ALL VALUES HAVE BEEN ESTIMATED AND WILL BE BOOKED BASED ON ACTUAL COSTS/EXPENSES

#1. One-time entry, to be made upon RUS approval, to transfer remaining net book value of Big Rivers' Coleman Station assets from the applicable plant-in-service accounts to 182.2 - Unrecovered Plant and Regulatory Study Costs Account.

Dr. 182.2 - Unrecovered Plant & Regulatory Study Costs	$ 144,920,000	
Dr. 108.x - Accumulated Depreciation of Utility Plant	$ 125,382,000	
Cr. 101.x - Utility Plant-In-Service		$ (270,302,000)

#2. One-time entry, to be made upon RUS approval, to transfer remaining net book value of Big Rivers' Reid Unit 1 assets from the applicable plant-in-service accounts to 182.2 - Unrecovered Plant and Regulatory Study Costs Account.

Dr. 182.2 - Unrecovered Plant & Regulatory Study Costs	$ 7,598,000	
Dr. 108.x - Accumulated Depreciation of Utility Plant	$ 17,285,000	
Cr. 101.x - Utility Plant-In-Service		$ (24,883,000)

#3. One-time entry, to be made upon KPSC approval, to transfer balance in 182.2 - Unrecovered Plant and Regulatory Study Costs for Coleman Station Account to 182.3 - Other Regulatory Asset Account.

Dr. 182.3 - Other Regulatory Asset	$ 144,920,000	
Cr. 182.2 - Unrecovered Plant & Regulatory Study Costs		$ (144,920,000)

#4 One-time entry, to be made upon KPSC approval, to transfer balance in 182.2 - Unrecovered Plant and Regulatory Study Costs for Reid Unit 1 Account to 182.3 - Other Regulatory Asset Account.

Dr. 182.3 - Other Regulatory Asset	$ 7,598,000	
Cr. 182.2 - Unrecovered Plant & Regulatory Study Costs		$ (7,598,000)

#5. One-time entry, to be made upon KPSC's issuance of its final order to recognize any amounts disallowed for recovery (if applicable).

Dr. 426.5 - Other Deductions	$ xx	
Cr. 182.3 - Other Regulatory Asset		$ xx

#6. Monthly entry, to be made after the effective date of Big Rivers' new tariff rates approved by the KPSC to amortize the regulatory assets balances for the amount recovered through rates during that period. Note: Estimated monthly amounts assume a 20-year recovery period.

Dr. 407.3 - Regulatory Debits	$ 635,492	
Cr. 182.3 - Other Regulatory Asset		$ (635,492)

Attachment C

EXCERPT FROM THE MINUTES OF
REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF BIG RIVERS ELECTRIC CORPORATION
HELD IN HENDERSON, KENTUCKY, ON
December 20, 2019

WHEREAS, management of the Corporation presented the Board with a "Successful Load Mitigation and Member Rate Reduction Plan," under which the Corporation would pass through to its Members short- and long-term benefits as a result of the Corporation's successful implementation of the Corporation's June 2012 Load Concentration Analysis and Mitigation Plan (the "Mitigation Plan"), which benefits include stabilizing and reducing Member rates while paying down existing regulatory asset balances;

WHEREAS, the Corporation is currently deferring the recognition of certain expenses and revenues through several regulatory accounts, including but not limited to:

- The regulatory assets the Kentucky Public Service Commission ("Commission") ordered the Corporation to establish to defer the depreciation expense on the Wilson and Coleman generating stations.
- The regulatory asset the Corporation established relating to the exiting of the Station Two Contracts.
- The regulatory asset the Corporation established relating to the costs of complying with the Disposal of Coal Combustion Residuals from Electric Utilities rule ("CCR"), which includes the deferral of expenses relating to the asset retirement obligations ("AROs") the Corporation was required to recognize for the future retirement of the Green and Station Two ash ponds.
- The regulatory liability the Corporation established to defer the difference between the amount assumed in its last rate proceeding that it would spend on demand-side management programs ("DSM") and the amount the Corporation currently spends.

EXCERPT FROM THE MINUTES OF
REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF BIG RIVERS ELECTRIC CORPORATION
HELD IN HENDERSON, KENTUCKY, ON
December 20, 2019

WHEREAS, under the Successful Load Mitigation and Member Rate Reduction Plan, the Corporation would:

- Retire the Coleman and Reid coal-fired generating units in 2020, and establish regulatory assets to defer the remaining net book value of those stations and any future obligations relating to those stations (the "Retirement Regulatory Assets").
- Seek the necessary approvals of the Corporation's 2020 Environmental Compliance Plan ("2020 ECP"), which includes, among other projects, transferring the existing flue gas desulfurization system ("FGD") at Coleman Station to Wilson Station, the closure of ash ponds, the recovery of the CCR regulatory asset, and the recovery of the AROs.
- Discontinue the deferral of the monthly depreciation expense on the Wilson and Coleman Stations.
- Utilize the DSM regulatory liability and 80% of equity headroom to reduce the balance of the remaining regulatory assets.
- Seek the necessary approvals to recover the remaining regulatory asset balances through existing rates.
- Make tariff changes to stabilize and reduce rates, including a Generating Station Maintenance Expense mechanism, a Times Interest Earned Ratio ("TIER") Credit mechanism, and a simplification of the existing Member Rate Stability Mechanism.
- File a new depreciation study with the Commission as required by the Commission's final order in Case No. 2018-00313 but not seek any material changes in depreciation rates.

EXCERPT FROM THE MINUTES OF
REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF BIG RIVERS ELECTRIC CORPORATION
HELD IN HENDERSON, KENTUCKY, ON
December 20, 2019

WHEREAS, establishing the Retirement Regulatory Assets is a departure from the Rural Development Uniform System of Accounts that also requires prior approval by the Rural Utilities Service;

RESOLVED, that the Board of Directors authorizes the retirement of the Coleman and Reid coal-fired generating units in 2020, and the establishment by the Corporation of the Retirement Regulatory Assets in the amount of the net book value of those stations at the time of retirement and any future obligations relating to those stations, the net book value of which is approximately $145 million for Coleman and $8 million for Reid as of October 31, 2019;

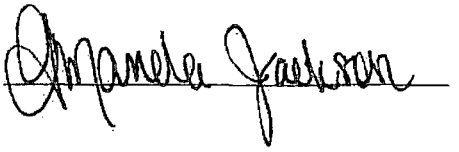
BE IT FURTHER RESOLVED, that the Board of Directors authorizes the Corporation to seek all approvals and to take all other actions necessary to implement the 2020 ECP and the Successful Load Mitigation and Member Rate Reduction Plan as presented to the Board, including any necessary tariff changes, with such additional changes as the President and Chief Executive Officer of the Corporation, in his sole discretion, considers appropriate and in the best interests of the Corporation;

BE IT FURTHER RESOLVED, that the Board of Directors authorizes the Corporation to seek rate recovery through the 2020 ECP of the CCR regulatory asset over a period not to exceed the end of the current Member contracts in 2043, to seek rate recovery through the 2020 ECP of the AROs and any future ash pond obligations over a ten-year rolling period, to use the DSM regulatory liability and up to 80% of the equity headroom to reduce the remaining regulatory assets, and to seek recovery of the remaining regulatory asset balances through existing rates over a period not to exceed the end of the current Member contracts in 2043 as part of the Successful Load Mitigation and Member Rate Reduction Plan; and

EXCERPT FROM THE MINUTES OF
REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF BIG RIVERS ELECTRIC CORPORATION
HELD IN HENDERSON, KENTUCKY, ON
December 20, 2019

BE IT FURTHER RESOLVED, that the Board of Directors of the Corporation authorizes its President/Chief Executive Officer, the Chief Financial Officer, or either of them, and any other employee of the Corporation authorized in writing by either of them, to execute, attest and deliver on behalf of the Corporation all necessary papers, documents, and applications for approvals or consents related to the foregoing, and to take any other action required to accomplish the foregoing.

I, Amanda Jackson, Executive Secretary of the Board of Directors of Big Rivers Electric Corporation, hereby certify that the above is a true and correct excerpt from the minutes of the Regular Meeting of the Board of Directors of said Corporation held on 12-20-19.



Case No. 2020-00_____

Exhibit Smith–3

Current MRSM Tariff and Bill Formats on File

Big Rivers Electric Corporation
Table of Contents

Standard Electric Rate Schedules – Terms and Conditions

DATE OF ISSUE 02/26/2019
DATE EFFECTIVE 10/23/2018

/s/ Robert W. Berry

ISSUED BY: Robert W. Berry,
President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420
Issued by Authority of an Order of the Commission, dated October 23, 2018, in Case No. 2018-00146

KENTUCKY
PUBLIC SERVICE COMMISSION
Gwen R. Pinson
Executive Director
Gwen R. Pinson
EFFECTIVE
10/23/2018
PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

Big Rivers ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

Original SHEET NO. 25

CANCELLING P.S.C. KY. No. 26

Original SHEET NO. 24

RATES, TERMS AND CONDITIONS – SECTION 1

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

Bill Format *(continued)*

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

MRSM ADJUSTMENT					00.00
MRSM – BASE RATE CREDIT					00.00
MRSM – TRANSMISSION RURAL ADJUSTMENT					00.00
MRSM – TRANSMISSION RURAL BASE RATE CREDIT					00.00
REBATE ADJUSTMENT					00.00
RER – RESIDENTIAL ADJUSTMENT					00.00
RER – RESIDENTIAL BASE RATE CREDIT					00.00
RER – BUSINESS ADJUSTMENT					00.00
RER – BUSINESS BASE RATE CREDIT					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

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

DATE OF ISSUE May 15, 2014
DATE EFFECTIVE February 1, 2014

/s/ Billie J. Richert

ISSUED BY: Billie J. Richert,
Vice President Accounting, Rates, and
Chief Financial Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420
Issued by Authority of an Order of the Commission, dated April 25, 2014, in Case No. 2013-00199

KENTUCKY
PUBLIC SERVICE COMMISSION
JEFF R. DEROUEN
EXECUTIVE DIRECTOR
TARIFF BRANCH
Brent Kirtley
EFFECTIVE
2/1/2014
PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

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

Bill Format (*continued*)

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

MRSM ADJUSTMENT					00,000.00
MRSM – BASE RATE CREDIT					00,000.00
MRSM – TRANSMISSION LARGE INDUSTRIAL ADJUSTMENT					00,000.00
MRSM – TRANSMISSION LARGE INDUSTRIAL BASE RATE CREDIT					00,000.00
RER – BUSINESS ADJUSTMENT					00,000.00
RER – BUSINESS BASE RATE CREDIT					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

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

Big Rivers ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

Second Revised SHEET NO. 65

CANCELLING P.S.C. KY. No. 27

First Revised SHEET NO. 65

RATES, TERMS AND CONDITIONS – SECTION 2

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, provided that this MRSM shall terminate on the last to occur of (i) the first day of the month following the month in which the balance in the Rural Economic Reserve Fund (as described in the RER rider) equals zero, (ii) the first month in which no additional transmission revenues from Century-Hawesville are forthcoming, (iii) the first month in which no additional Nebraska Margin deposits are anticipated, and (iv) the first month in which no additional Station Two Depreciation Credit deposits are anticipated. [T] [T]

Definitions:

Please see Section 4 for definitions common to all tariffs.

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. Pursuant to the Commission's Order dated April 25, 2014, in Case No. 2013-00199, Big Rivers shall also deposit the transmission revenues it receives from Century-Hawesville into the Economic Reserve. Pursuant to the Commission's Order dated July 21, 2015, in Case No. 2014-00134, Big Rivers shall also deposit margins from certain wholesale sales contracts ("Nebraska Margins") into the Economic Reserve, as described in the "Nebraska Margins" section of this schedule. Pursuant to the Commission's Order dated October 23, 2018, in Case No. 2018-00146, Big Rivers shall also deposit a credit associated with Station Two depreciation ("Station Two Depreciation Credit") into the Economic Reserve, as described in the "Station Two Depreciation Credit" section of this schedule. The Economic Reserve is established as seven stand-alone investment accounts, each accruing interest: the first account is for the original fund, the second is for transmission revenues allocated to the Rural class (customers served under Standard Rate Schedule RDS), the third is for transmission revenues allocated to the Large Industrial class (customers served under Standard Rate Schedule LIC), the fourth is for Nebraska Margins allocated to the Rural class, the fifth is for Nebraska Margins allocated to the Large Industrial class, [N] [N] [N] [N] [T] [T]

DATE OF ISSUE February 26, 2019
DATE EFFECTIVE October 23, 2018

/s/ Robert W. Berry

ISSUED BY: Robert W. Berry,
President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420
Issued by Authority of an Order of the Commission, dated October 23, 2018, in Case No. 2018-00146

KENTUCKY
PUBLIC SERVICE COMMISSION
Gwen R. Pinson
Executive Director
Gwen R. Pinson
EFFECTIVE
10/23/2018
PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

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

Member Rate Stability Mechanism (*continued*):

the sixth is for Station Two Depreciation Credits allocated to the Rural class, and the seventh is for Station Two Depreciation Credits allocated to the Large Industrial class. [N] [N]

The transmission revenues are allocated 79.2% to the Rural class and 20.8% to the Large Industrial class. The Nebraska Margins are allocated between the Rural class and the Large Industrial class based upon the total revenues received from each class during the calendar year in which Big Rivers earns the margins. The Station Two Depreciation Credits are allocated 72.62% to the Rural class and 27.38% to the Large Industrial class. [T] [N] [N] [D]

The MRSM credit will draw first from the accounts containing Nebraska Margins and then from the applicable accounts containing transmission revenues, and then from the applicable accounts containing the Station Two Depreciation Credit to provide a credit to each Member during a month. [T] [N] [N] [D]

The MRSM adjustment shall be no longer applicable once the Economic Reserve is exhausted and no additional transmission revenues from Century-Hawesville or Nebraska Margins or Station Two Depreciation Credit are forthcoming, but the MRSM shall remain a schedule in this tariff until no additional transmission revenues from Century-Hawesville or Nebraska Margins or Station Two Depreciation Credit are forthcoming, as described in the "Availability" section of this schedule. [T]

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

Member Rate Stability Mechanism (*continued*):

Nebraska Margins:

The Nebraska Margins shall be the margins resulting from the wholesale contracts approved in Case No. 2014-00134. Pursuant to the Commission's Order in that case dated July 21, 2015, each January, Big Rivers shall compare its margins for the previous year to the margins that would have provided the Times Interest Earned Ratio ("TIER") that the Commission used to establish the revenue requirement in Big Rivers' most recent general rate proceeding (the "Revenue Requirement TIER").

Big Rivers shall also compare its average daily balance of unrestricted cash and temporary investments for the last three calendar months of the previous calendar year (the "Average Cash Balance") to the Cash Balance Threshold, as defined below.

(1) If for the previous year:

(a) Big Rivers' actual margins are greater than the margins at the Revenue Requirement TIER;
(b) the Nebraska Margins are greater than zero; *and*
(c) the Average Cash Balance is greater than $60,000,000 (the "Cash Balance Threshold"),

then Big Rivers shall deposit into the Economic Reserve each month for twelve (12) consecutive months one-twelfth (1/12) of *the lesser of*:

(d) the portion of the Nebraska Margins from the previous calendar year that would reduce Big Rivers' actual TIER to the Revenue Requirement TIER; *and*
(e) the positive difference between the Average Cash Balance and the Cash Balance Threshold.

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

Nebraska Margins (*continued*):

(2) If one or more of (a), (b), and (c) above are not satisfied, then no Nebraska Margins for that year shall be deposited into the Economic Reserve.
(3) If Big Rivers is required by this schedule to deposit all or a portion of the Nebraska Margins for a year into the Economic Reserve, it shall do so no later than the last business day of each month, beginning in February of the following year.
(4) Each such deposit of Nebraska Margins shall be expensed in the prior calendar year in which Big Rivers earned those margins.

Station Two Depreciation Credit: [N]

A "Station Two Depreciation Credit" shall be established in the amount of $453,785 per month for twelve (12) consecutive months (for a total credit of $5,445,420) beginning the latter of January 2019 or the month following the Commission's acceptance of this tariff, pursuant to the Commission's Order in Case No. 2018-00146 dated October 23, 2018.

(1) Each month in which a credit is owed, Big Rivers will deposit the monthly credit into the applicable Economic Reserve accounts for the Rural and Large Industrial rate classes.
(2) The credit will be allocated 72.62% to the Rural class and 27.38% to the Large Industrial class.
(3) The Large Industrial share will be applied to Large Industrial retail customer energy usage excluding energy associated with load to which a Big Rivers economic development rate applies.

If Big Rivers is able to cease operating Station Two prior to May 31, 2019, the amount of monthly Station Two Depreciation Credit for the remainder of the twelve-month credit period shall be increased by an amount determined (i) by multiplying $9,422 by the number of days prior to May 31, 2019, that Big Rivers ceases operating Station Two, and (ii) dividing that result by the remaining number of months of the Station Two Depreciation Credit. For purposes of this tariff, the date on which Big Rivers ceases operating Station Two is the date on which Big Rivers stops recording Station Two depreciation expense on its books.

Big Rivers ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

Second Revised SHEET NO. 69

CANCELLING P.S.C. KY. No. 27

First Revised SHEET NO. 69

RATES, TERMS AND CONDITIONS – SECTION 2

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

Tariff Sheet CANCELLED **[T]**

Reserved for Future Use **[T]**

DATE OF ISSUE February 26, 2019
DATE EFFECTIVE October 23, 2018

/s/ Robert W. Berry

ISSUED BY: Robert W. Berry,
President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420
Issued by Authority of an Order of the Commission, dated October 23, 2018, in Case No. 2018-00146

KENTUCKY
PUBLIC SERVICE COMMISSION
Gwen R. Pinson
Executive Director
Gwen R. Pinson
EFFECTIVE
10/23/2018
PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

Big Rivers ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

First Revised SHEET NO. 69.01

CANCELLING P.S.C. KY. No.

Original SHEET NO. 69.01

RATES, TERMS AND CONDITIONS – SECTION 2

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

Tariff Sheet CANCELLED **[T]**

Reserved for Future Use **[T]**

DATE OF ISSUE February 26, 2019
DATE EFFECTIVE October 23, 2018

/s/ Robert W. Berry

ISSUED BY: Robert W. Berry,
President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420
Issued by Authority of an Order of the Commission, dated October 23, 2018, in Case No. 2018-00146

KENTUCKY
PUBLIC SERVICE COMMISSION
Gwen R. Pinson
Executive Director
Gwen R. Pinson
EFFECTIVE
10/23/2018
PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

Case No. 2020-00_____

Exhibit Smith–4
Proposed MRSM Tariff and Bill Formats

Big Rivers Electric Corporation
Table of Contents

Standard Electric Rate Schedules – Terms and Conditions

DATE OF ISSUE February 28, 2020
DATE EFFECTIVE March 30, 2020

/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*)

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

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.

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. 2020-00_____, 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.

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 Rural and Large Industrial classes 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.

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. 2020-00_____, then the TIER Credit shall equal 100% of Adjusted Net Margins in excess of a 1.30 TIER.

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

[T]

Tariff Sheet CANCELLED

Reserved for Future Use

Big Rivers ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

Third Revised SHEET NO. 68

CANCELLING P.S.C. KY. No. 27

Second Revised SHEET NO. 68

RATES, TERMS AND CONDITIONS – SECTION 2

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

[T]

Tariff Sheet CANCELLED

Reserved for Future Use

DATE OF ISSUE February 28, 2020
DATE EFFECTIVE March 30, 2020

/s/ Robert W. Berry

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

Case No. 2020-00_____

Exhibit Smith–5

Redline of Proposed MRSM Tariff and Bill Formats

Big Rivers Electric Corporation
Table of Contents

Standard Electric Rate Schedules – Terms and Conditions

DATE OF ISSUE ~~February 26, 2019~~ February 28, 2020

DATE EFFECTIVE ~~October 23, 2018~~ March 30, 2020

/s/ Robert W. Berry

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

~~*Issued by Authority of an Order of the Commission, dated October 23, 2018, in Case No. 2018-00146*~~

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	
~~MRSM – BASE RATE CREDIT~~					~~00.00~~	[D]
~~MRSM – TRANSMISSION RURAL ADJUSTMENT~~					~~00.00~~	
~~MRSM – TRANSMISSION RURAL BASE RATE CREDIT~~					~~00.00~~	
~~REBATE ADJUSTMENT~~					~~00.00~~	
~~RER – RESIDENTIAL ADJUSTMENT~~					~~00.00~~	
~~RER – RESIDENTIAL BASE RATE CREDIT~~					~~00.00~~	
~~RER – BUSINESS ADJUSTMENT~~					~~00.00~~	
~~RER – BUSINESS BASE RATE CREDIT~~					~~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	

-------- 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

Big Rivers ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

~~Original~~ First Revised SHEET NO. 30

CANCELLING P.S.C. KY. No. ~~26~~ 27

Original SHEET NO. ~~28~~ 30

RATES, TERMS AND CONDITIONS – SECTION 1

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
~~MRSM – BASE RATE CREDIT~~						~~00,000.00~~
~~MRSM – TRANSMISSION LARGE INDUSTRIAL ADJUSTMENT~~						~~00,000.00~~
~~MRSM – TRANSMISSION LARGE INDUSTRIAL BASE RATE CREDIT~~						~~00,000.00~~
~~RER – BUSINESS ADJUSTMENT~~						~~00,000.00~~
~~RER – BUSINESS BASE RATE CREDIT~~						~~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 ~~May 15, 2014~~ February 28, 2020

DATE EFFECTIVE ~~February 1, 2014~~ March 30, 2020

/s/ ~~Billie J. Richert~~ Robert W. Berry

ISSUED BY: ~~Billie J. Richert~~Robert W. Berry,
~~Vice President Accounting, Rates, and Chief Financial Officer~~President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420

~~*Issued by Authority of an Order of the Commission, dated April 25, 2014, in Case No. 2013-00199*~~

Big Rivers Electric Corporation
Case No. 2020-00_____
Redline of Present MRSM – Member Rate Stability Mechanism versus Proposed MRSM – Member Rate Stability Mechanism
(Reflecting Changes to Sheet No. 65 through Sheet 68 where, Sheet No. 67 and Sheet No. 68 are CANCELLED, and Sheet No. 69 and Sheet No. 69.01 are UNCHANGED)

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.

Definitions:

Please see Section 4 for definitions common to all tariffs.

For the period through the December 2020 service month:

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. ~~Pursuant to the Commission's Order dated April 25, 2014, in Case No. 2013-00199,~~ Big Rivers shall ~~also~~ deposit the transmission revenues it receives from Century-Hawesville into the Economic Reserve through November 30, 2020.~~ Pursuant to the Commission's Order dated July 21, 2015, in Case No. 2014-00134, Big Rivers shall also deposit margins from certain wholesale sales contracts ("Nebraska Margins") into the Economic Reserve, as described in the "Nebraska Margins" section of this schedule. Pursuant to the Commission's Order dated October 23, 2018, in Case No. 2018-00146, Big Rivers shall also deposit a credit associated with Station Two depreciation ("Station Two Depreciation Credit") into the Economic Reserve, as described in the "Station Two Depreciation Credit" section of this schedule. The Economic Reserve is established as seven stand-alone investment accounts, each accruing interest: the first account is for the original fund, the second is for transmission revenues allocated to the Rural class (customers served under Standard Rate Schedule RDS), the third is for transmission revenues allocated to the Large Industrial class (customers served under Standard Rate Schedule LIC), the fourth is for Nebraska Margins allocated to the Rural class, the fifth is for Nebraska Margins allocated to the Large Industrial class, the sixth is for Station~~

~~Two Depreciation Credits allocated to the Rural class, and the seventh is for Station Two Depreciation Credits allocated to the Large Industrial class.~~

_The transmission revenues are allocated 79.2% to the Rural class and 20.8% to the Large Industrial class. ~~The Nebraska Margins are allocated between the Rural class and the Large Industrial class based upon the total revenues received from each class during the calendar year in which Big Rivers earns the margins. The Station Two Depreciation Credits are allocated 72.62% to the Rural class and 27.38% to the Large Industrial class.~~

_The MRSM credit will draw ~~first from the accounts containing Nebraska Margins and then~~ from the applicable accounts containing transmission revenues~~, and then from the applicable accounts containing the Station Two Depreciation Credit~~ to provide a credit to each Member during a month.

~~The MRSM adjustment shall be no longer applicable once the Economic Reserve is exhausted and no additional transmission revenues from Century Hawesville or Nebraska Margins or Station Two Depreciation Credit are forthcoming, but the MRSM shall remain a schedule in this tariff until no additional transmission revenues from Century Hawesville or Nebraska Margins or Station Two Depreciation Credit are forthcoming, as described in the "Availability" section of this schedule.~~

~~**Nebraska Margins:**~~

~~The Nebraska Margins shall be the margins resulting from the wholesale contracts approved in Case No. 2014-00134. Pursuant to the Commission's Order in that case dated July 21, 2015, each January, Big Rivers shall compare its margins for the previous year to the margins that would have provided the Times Interest Earned Ratio ("TIER") that the Commission used to establish the revenue requirement in Big Rivers' most recent general rate proceeding (the "Revenue Requirement TIER").~~

~~Big Rivers shall also compare its average daily balance of unrestricted cash and temporary investments for the last three calendar months of the previous calendar year (the "Average Cash Balance") to the Cash Balance Threshold, as defined below.~~

~~(1) If for the previous year:~~

~~(a) Big Rivers' actual margins are greater than the margins at the Revenue Requirement TIER;~~

~~(b) the Nebraska Margins are greater than zero; *and*~~
~~(c) the Average Cash Balance is greater than $60,000,000 (the "Cash Balance Threshold").~~

~~*then* Big Rivers shall deposit into the Economic Reserve each month for twelve (12) consecutive months one twelfth (1/12) of *the lesser of*:~~

~~(d) the portion of the Nebraska Margins from the previous calendar year that would reduce Big Rivers' actual TIER to the Revenue Requirement TIER; *and*~~
~~(e) the positive difference between the Average Cash Balance and the Cash Balance Threshold.~~

~~(2) If one or more of (a), (b), and (c) above are not satisfied, then no Nebraska Margins for that year shall be deposited into the Economic Reserve.~~
~~(3) If Big Rivers is required by this schedule to deposit all or a portion of the Nebraska Margins for a year into the Economic Reserve, it shall do so no later than the last business day of each month, beginning in February of the following year.~~
~~(4) Each such deposit of Nebraska Margins shall be expensed in the prior calendar year in which Big Rivers earned those margins.~~

~~Station Two Depreciation Credit:~~

~~A "Station Two Depreciation Credit" shall be established in the amount of $453,785 per month for twelve (12) consecutive months (for a total credit of $5,445,420) beginning the latter of January 2019 or the month following the Commission's acceptance of this tariff, pursuant to the Commission's Order in Case No. 2018-00146 dated October 23, 2018.~~

~~(1) Each month in which a credit is owed, Big Rivers will deposit the monthly credit into the applicable Economic Reserve accounts for the Rural and Large Industrial rate classes.~~
~~(2) The credit will be allocated 72.62% to the Rural class and 27.38% to the Large Industrial class.~~
~~(3) The Large Industrial share will be applied to Large Industrial retail customer energy usage excluding energy associated with load to which a Big Rivers economic development rate applies.~~

~~If Big Rivers is able to cease operating Station Two prior to May 31, 2019, the amount of monthly Station Two Depreciation Credit for the remainder of the twelve month credit period~~

~~shall be increased by an amount determined (i) by multiplying $9,422 by the number of days prior to May 31, 2019, that Big Rivers ceases operating Station Two, and (ii) dividing that result by the remaining number of months of the Station Two Depreciation Credit. For purposes of this tariff, the date on which Big Rivers ceases operating Station Two is the date on which Big Rivers stops recording Station Two depreciation expense on its books.~~

For the period beginning with the January 2021 service month:

Member Rate Stability Mechanism:

Pursuant to the Commission's Order dated _____, 2020, in Case No. 2020-00_____, 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.

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 Rural and Large Industrial classes 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.

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. 2020-00_____, then the TIER Credit shall equal 100% of Adjusted Net Margins in excess of a 1.30 TIER.

Big Rivers Electric Corporation
Case No. 2020-00_____
Estimated Member Billing Impact

Rate Class	2021 Forecast Annual Usage (MWh)	2021 Forecast Annual Revenue ($000s)	2021 Forecast Annual Rate ($/MWh)	2021 As Adjusted for New TIER Credit 50% New TIER Credit ($000s)	Rate Decrease ($/MWh)	New Rate ($/MWh)	New Billings ($000s)	Annual Decrease ($000s)	Annual Decrease (%)	Monthly Impact Usage (MWh)	Revenue ($000s)	Rate Decrease (%)
Rurals - RDS Tariff Schedule	2,282,302	$ 195,232	$ 85.54	$ (2,480)	$ (1.09)	$ 84.46	$ 192,752	$ (2,480)	-1.27%	190,192	$ (207)	-1.27%
Large Industrials LIC Tariff Schedule	939,183	60,552	$ 64.47	(730)	$ (0.78)	$ 63.70	59,822	(730)	-1.21%	78,265	$ (61)	-1.21%
		$ 255,784		$ (3,210)			$ 252,574	$ (3,210)				

Case No. 2020-00_____
Exhibit Smith-6
Direct Testimony of Paul G. Smith
Page 1 of 1

Big Rivers Electric Corporation
Case No. 2020-00_____
Illustrative Regulatory Asset Amortization Schedule
($ Millions)

	Total 2019-2043	2019	2020	2021	2022	2023	2024	2025	2026	2027
Beginning Balance		$ -	$ 220	$ 351	$ 248	$ 236	$ 224	$ 212	$ 215	$ 203
Station Two	$ 95	90	-	-	-	-	-	5	-	-
Coleman Deferred Depreciation	40	37	3	-	-	-	-	-	-	-
Wilson Deferred Depreciation	141	121	20	-	-	-	-	-	-	-
Coleman Station	122	-	117	-	-	-	-	5	-	-
Reid Unit 1	11	-	6	-	-	-	-	5	-	-
Focused Management Audit	1	1	-	-	-	-	-	-	-	-
Subtotal	410	249	366	351	248	236	224	227	215	203
Station Two TIER Credit	(28)	(28)	-	-	-	-	-	-	-	-
DSM Liability	(1)	(1)	-	-	-	-	-	-	-	-
Member Equity Utilization	(91)	-	-	(91)	-	-	-	-	-	-
Annual Amortization	(230)	-	-	(10)	(10)	(10)	(10)	(10)	(10)	(10)
New TIER Credit	(61)	-	(15)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Ending Balance	$ (1)	$ 220	$ 351	$ 248	$ 236	$ 224	$ 212	$ 215	$ 203	$ 191

Big Rivers Electric Corporation
Case No. 2020-00_____
Illustrative Regulatory Asset Amortization Schedule
($ Millions)

	Total 2019-2043	2028	2029	2030	2031	2032	2033	2034	2035	2036
Beginning Balance		$ 191	$ 179	$ 167	$ 155	$ 143	$ 131	$ 119	$ 107	$ 95
Station Two	$ 95	-	-	-	-	-	-	-	-	-
Coleman Deferred Depreciation	40	-	-	-	-	-	-	-	-	-
Wilson Deferred Depreciation	141	-	-	-	-	-	-	-	-	-
Coleman Station	122	-	-	-	-	-	-	-	-	-
Reid Unit 1	11	-	-	-	-	-	-	-	-	-
Focused Management Audit	1	-	-	-	-	-	-	-	-	-
Subtotal	410	191	179	167	155	143	131	119	107	95
Station Two TIER Credit	(28)	-	-	-	-	-	-	-	-	-
DSM Liability	(1)	-	-	-	-	-	-	-	-	-
Member Equity Utilization	(91)	-	-	-	-	-	-	-	-	-
Annual Amortization	(230)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
New TIER Credit	(61)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Ending Balance	$ (1)	$ 179	$ 167	$ 155	$ 143	$ 131	$ 119	$ 107	$ 95	$ 83

Big Rivers Electric Corporation
Case No. 2020-00_____
Illustrative Regulatory Asset Amortization Schedule
($ Millions)

	Total 2019-2043	2037	2038	2039	2040	2041	2042	2043
Beginning Balance		$ 83	$ 71	$ 59	$ 47	$ 35	$ 23	$ 11
Station Two	$ 95	-	-	-	-	-	-	-
Coleman Deferred Depreciation	40	-	-	-	-	-	-	-
Wilson Deferred Depreciation	141	-	-	-	-	-	-	-
Coleman Station	122	-	-	-	-	-	-	-
Reid Unit 1	11	-	-	-	-	-	-	-
Focused Management Audit	1	-	-	-	-	-	-	-
Subtotal	410	83	71	59	47	35	23	11
Station Two TIER Credit	(28)	-	-	-	-	-	-	-
DSM Liability	(1)	-	-	-	-	-	-	-
Member Equity Utilization	(91)	-	-	-	-	-	-	-
Annual Amortization	(230)	(10)	(10)	(10)	(10)	(10)	(10)	(10)
New TIER Credit	(61)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Ending Balance	$ (1)	$ 71	$ 59	$ 47	$ 35	$ 23	$ 11	$ (1)