COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

JOINT APPLICATION OF BIG RIVERS ELECTRIC CORPORATION AND MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION FOR APPROVAL OF CONTRACTS FOR ELECTRIC SERVICE WITH NUCOR CORPORATION AND APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL OF TARIFF.	)))))))))))	CaseNo.2019-00365

JOINT APPLICATION

1. Big Rivers Electric Corporation ("Big Rivers") and Meade County Rural Electric Cooperative Corporation ("Meade") submit this Joint Application pursuant to KRS 278.030, 278.040, 278.160, and 278.180; 807 KAR 5:001, Section 14; and 807 KAR 5:011, Sections 6, 9, and 13, seeking an order from the Kentucky Public Service Commission ("Commission") approving: 1) the retail contract for electric service between Meade and Nucor Corporation ("Nucor") executed September 9, 2019, attached as Berry-Ex. 2 (the "Retail Agreement"); and 2) the letter agreement between Big Rivers and Meade executed September 18, 2019 effectuating the terms of the Retail Agreement, attached as Berry-Ex. 3 (the "Wholesale Agreement"). Approval of the proposed contracts is necessary in order to facilitate the construction of a new Nucor facility in Brandenburg, Kentucky ("Facility") that would significantly bolster the Commonwealth's economy, creating

400 direct jobs (at an annual average wage of $72,000), 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 ("GDP") once fully operational.[1] Additionally, Big Rivers seeks approval to establish a modified version of the Large Industrial Customer Expansion ("LICX") tariff that was in effect from 2000 through 2014.[2] This is not a request for a general adjustment in existing rates.

2. Joint Applicants respectfully request that the Commission conduct an expedited review of this Application in order to provide Nucor the rate assurance it needs to finalize construction of the Facility. Approval of this Application is consistent with the Governor's policy of making Kentucky the engineering and manufacturing hub of excellence in the world.

BACKGROUND

3. Big Rivers is a rural electric cooperative corporation organized pursuant to KRS Chapter 279. Its full name is Big Rivers Electric Corporation. Big Rivers' mailing address is P.O. Box 24, Henderson, Kentucky 42419-0024, and its

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[1] *See* Berry-Ex.4. Construction and capital investment associated with the contemplated facility alone is expected to temporarily create 2,349 jobs, increase incomes annually by $151.1 million, and add approximately $216 million to Kentucky's annual GDP.

[2] *In the Matter of the Tariff Filing of Big Rivers Electric Corporation to Revise the Large Industrial Customer Rate Schedule*, Case No. 99-360, Order (February 25, 2000) (referring to the tariff as "Rate Schedule 10"); *In the Matter of the Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period*, Case No. 2013-00199, Order (April 25, 2014).

street address is 201 Third Street, Henderson, Kentucky 42420. Big Rivers' address for electronic mail service is regulatory@bigrivers.com.[3]

4. 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 distribution cooperative members: Jackson Purchase Energy Corporation, Kenergy Corp., and Meade (collectively, the "Members"). The Members in turn provide retail electric service to approximately 117,000 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.

5. 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.[4]

6. Meade is an electric cooperative corporation duly organized and existing under Chapter 279 of the Kentucky Revised Statutes. Its full name is Meade County Rural Electric Cooperative Corporation. Meade's address is 1351 Highway Seventy-Nine, P.O. Box 489, Brandenburg, KY 40108-0489. Meade's address for electronic mail service is mlittrel@mcrecc.com.[5]

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[3] 807 KAR 5:001 Section 14(1).

[4] 807 KAR 5:001 Section 14(2).

[5] 807 KAR 5:001 Section 14(1).

7. Meade was incorporated in the Commonwealth of Kentucky on June 4, 1937, and hereby attests that it is currently in good standing in Kentucky.[6]

8. Nucor is the largest steel producer in the United States with facilities located throughout the country, including an existing facility in Ghent, Kentucky (Nucor Steel Gallatin) served by East Kentucky Power Cooperative, Inc. In January 2019, Nucor announced that it is considering investing approximately $1.35 billion to build a state-of-the-art 1.5 million square foot plate mill on the Buttermilk Falls Site in Brandenburg, Kentucky, consisting of electric arc furnaces, continuous casters, rolling mills, air separation facilities, scrap and raw materials processing facilities, slag processing facilities, and other facilities incidental and necessary to the production of steel. The mill would produce cut-to-length, heat-treated and discrete steel plate in widths and thicknesses that are not currently offered by Nucor. The contemplated Facility, which Nucor aims to begin operating by 2022, is projected to have an annual capacity of approximately 1.2 million tons. Between the capital investment required to construct and operate the Facility and the costs associated with the planned expansion of Nucor Steel Gallatin, Nucor intends to invest over $2 billion in Kentucky in the coming years.

9. Big Rivers, Meade, and Nucor have engaged in a series of discussions regarding the contemplated Facility. Through these discussions, it has become apparent that the assurance of long-term competitive power pricing is a critical factor in Nucor's decision-making process. Nucor's Facility would be highly energy-intensive, utilizing up to [redacted] of electricity on a yearly basis. And once

[6] 807 KAR 5:001 Section 14(2).

developed, that Facility would face both national and international competition, including competition from steelmakers receiving significant incentives on their electric pricing.

10. Consequently, in order to ensure that Nucor proceeds with its intended investment in Kentucky, Big Rivers, Meade, and Nucor have negotiated the proposed special contracts described in detail below, which would become effective no later than [redacted] and would govern Nucor's electric pricing for [redacted]. Joint Applicants respectfully request that the Commission approve those contracts, which set forth fair, just, reasonable rates, and will help to fulfill the economic development policy objectives of the Commonwealth.

DESCRIPTION OF SPECIAL CONTRACTS

11. As described more fully in the Direct Testimony of Robert W. Berry, the Retail and Wholesale Agreements require Meade to purchase all of the energy and capacity needed to serve the Facility from Big Rivers for [redacted] after the date that Nucor commences production of steel in commercial quantities at the Facility, but no later than [redacted] ("the Service Commencement Date"). The rates that Big Rivers would charge for such power are set forth in Exhibit C of the Retail Agreement. The Wholesale Agreement outlines Big Rivers' concurrence with the terms of the Retail Agreement.

12. From the Service Commencement Date through [redacted], Nucor would be subject to the [redacted] monthly demand charge set forth in the Retail

Agreement for the first [redacted] of billing demand.[7] Billing demand under the contract would equal Nucor's [redacted] during a billing month, provided however, that Nucor's billing demand for any billing month could not be less than [redacted] of the highest measured demand in the previous twelve-month period. For any demand above [redacted] [redacted], Nucor would pay a monthly demand charge equal to the greater of: 1) the demand charge set forth in Big Rivers' Large Industrial Customer tariff, or any successor tariff; *or* 2) Big Rivers' out-of-pocket costs for that demand. Nucor would also pay [redacted] on-peak and off-peak energy charges for all energy consumed during a billing month at the [redacted] rates specifically delineated in the Retail Agreement. During this period, Nucor [redacted]

13. On or after [redacted], and through the end of the contract term, Nucor would pay for power as follows:

[redacted]

[7] Under Section 2.03(b) of the Retail Agreement, Nucor may request a price quote for an increase in the [redacted] Maximum Contract Demand, subject to the capability of Big Rivers' then-existing transmission facilities.

[redacted]

[redacted]

[redacted]

[redacted]

17. Throughout the term of the Retail Agreement, Nucor [redacted]

18. If the Retail Agreement expired or was terminated for any reason, Nucor would be required to pay a Termination Charge, which would [redacted] would also provide system-wide benefits to other customers.

REQUEST FOR APPROVAL OF SPECIAL CONTRACTS

19. The proposed special contracts result in rates that are fair, just, and reasonable. The [redacted] cost arrangement set forth through [redacted], (spanning [redacted]) ensures that Nucor has the long-term stable price signal it needs to proceed with a $1.35 billion expansion in Kentucky. The rates proposed to be effective during that period are expected to cover the incremental costs associated with the special contracts in addition to making some contribution to Big Rivers' fixed costs, and Big Rivers intends to hedge its future

energy production and procurement to help fulfill these expectations. In the remaining [redacted] of the contracts, [redacted] would provide a significant contribution to fixed costs on the Big Rivers' system.

20. By approving the special contract rates as proposed, the Commission would significantly bolster Kentucky's economy, facilitating the creation of 400 direct jobs, over 2,600 indirect jobs, approximately $189 million in annual labor income, $14.3 million in annual state and local tax revenues, and approximately $360 million in annual GDP. GDP represents the total value of all economic activity in a given region, a direct indication of the health and growth of the economy. The positive benefits of industrial manufacturers that export nationally and internationally is why multiple states other than Kentucky aggressively pursued the Nucor plant with economic development incentives. Accordingly, Joint Applicants respectfully request that the Commission act expeditiously to approve both the Retail and Wholesale Agreements.

REQUEST TO REINSTATE A MODIFIED VERSION OF LARGE INDUSTRIAL CUSTOMER EXPANSION TARIFF

21. As described more fully in the Direct Testimony of Paul G. Smith, from 2000 through 2014, Big Rivers' tariffs included a LICX tariff (initially known as "Rate Schedule 10"), which was implemented in Case No. 99-360 in order to address Big Rivers' concern that a forecasted unexpectedly robust native load

growth would eventually exceed its power supply and that Big Rivers could not absorb volatile wholesale market prices in light of its recent bankruptcy proceedings. Under that tariff, Big Rivers could offer certain eligible customers market-based rates for power, plus a per kW-month adder.

22. The Commission initially established the LICX tariff as a three-year pilot program,[8] but continually extended the tariff's life.[9] Finally, in 2014, at Big Rivers' request, the Commission eliminated the LICX tariff since, with the departure of the smelters from the Big Rivers' system, Big Rivers no longer had any capacity shortage issues.[10]

23. As discussed above, the Retail Arrangement incorporates a modified version of the previous LICX tariff, under which the purchases of qualifying large industrial or commercial customers with new or expanded load equal to fifty (50) MWs or greater, would be supplied at the actual market prices of power purchased by Big Rivers from third-party suppliers, including all capacity and energy charges, charges to compensate for transmission losses on third-party transmission systems, all transmission and ancillary services charges on third-party transmission systems paid by Big Rivers to purchase the power and have it delivered to Big Rivers' transmission system, and all MISO expenses and costs. Like the previous LICX tariff, eligible customers would be subject to an adder for all of the power purchased

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[8] *In the Matter of the Tariff Filing of Big Rivers Electric Corporation to Revise the Large Industrial Customer Rate Schedule*, Case No. 99-360, Order (February 25, 2000) (referring to the tariff as "Rate Schedule 10").

[9] Case No. 2002-00272, Order (October 1, 2002); Case No. 2005-00275, Order (August 11, 2005), Case No. 2007-00164, Order (February 1, 2008).

[10] *In the Matter of the Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period*, Case No. 2013-00199, Order (April 25, 2014).

under the tariff. But under the modified version of the LICX tariff, the level of that adder would vary by customer on a case-by-case basis.

24. The reestablishment of a modified LICX tariff is not only an important part in the Retail Agreement with Nucor. It may also help facilitate further economic development in the Commonwealth. Big Rivers has recently begun discussions with several other companies interested in expanding into its service territory. Should some or all of these discussions continue to fruition, Big Rivers anticipates that it will again have a capacity need for an LICX tariff.

25. This potential capacity need is the result of the successful implementation of Big Rivers' risk mitigation plan.[11] Since that plan was put into action in 2012, Big Rivers has taken numerous actions to mitigate the impacts of the loss of the smelter load from its system, including idling the Coleman assets, ceasing operation of the Station Two generating units, and making off-system sales to Nebraska, Kentucky Municipal Energy Agency, and Owensboro Municipal Utilities, among others. With the contemplated Nucor expansion into Big Rivers' service territory, Big Rivers can replace its shorter off-system sales through increased native load sales and offset the remaining smelter load loss, achieving the ultimate goal of the mitigation plan.

26. Accordingly, in order to facilitate Nucor's $1.35 billion expansion into Kentucky and to prevent any undue delay in another large customer's potential expansion into Big Rivers' service territory, Big Rivers now seeks to reinstate a

[11] *Focus Management and Operations Audit of Big Rivers Electric Corporation Prepared for the Kentucky Public Service Commission* (December 8, 2015), *available at:* https://psc.ky.gov/agencies/psc/hot_list/BRECActionPlanFINAL12-04-15.pdf.

modified version of the LICX tariff. The proposed new LICX tariff is included with this Application as Exhibit E to the Retail Agreement.

LIST OF TESTIMONY AND EXHIBITS

The Testimony and Exhibits that are attached to this and are made part of this Application are as follows:

Direct Testimony of Robert W. Berry and Berry-Exs. 1-4: Provides an overview of the proposed contracts and explains why those contracts should be approved.

Direct Testimony of Paul G. Smith and Smith-Ex 1: Explains Large Industrial Customer Expansion tariff proposal.

CONCLUSION

WHEREFORE, Joint Applicants respectfully request that the Commission enter an Order:

1. Approving, on an expedited basis, both the Retail and Wholesale Agreements as proposed in this Application;

2. Approving the establishment of the Large Industrial Customer Expansion Tariff; and

3. Granting all other relief to which Big Rivers is entitled.

On this the 18th day of October, 2019.

Respectfully submitted,

Tyson Kamuf, Esq.
BIG RIVERS ELECTRIC CORPORATION
201 Third Street, P.O. Box 727
Henderson, Kentucky 42419-0024
Ph: (270)827-2561 Fax: (270)844-6417
tyson.kamuf@bigrivers.com

Michael L. Kurtz, Esq.
Kurt J. Boehm, Esq.
Jody Kyler Cohn, Esq.
BOEHM, KURTZ & LOWRY
36 East Seventh Street, Suite 1510
Cincinnati, Ohio 45202
Ph: (513)421-2255 Fax: (513)421-2764
E-Mail: mkurtz@BKLlawfirm.com
kboehm@BKLlawfirm.com
jkylercohn@BKLlawfirm.com

Counsel for Big Rivers Electric Corporation and Meade County Rural Electric Cooperative Corporation

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF BIG RIVERS ELECTRIC CORPORATION AND MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION FOR APPROVAL OF CONTRACTS FOR ELECTRIC SERVICE WITH NUCOR CORPORATION.	)	Case No. 2019-00365
AND	)	
APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL OF TARIFF.	)	

DIRECT TESTIMONY

OF

ROBERT W. BERRY

PRESIDENT AND CHIEF EXECUTIVE OFFICER

ON BEHALF OF
BIG RIVERS ELECTRIC CORPORATION

Filed: October 18, 2019

DIRECT TESTIMONY
OF
ROBERT W. BERRY

I. INTRODUCTION

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

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

Q. Please summarize your education and professional experience.

A. I have been employed in my current position since July 1, 2014. 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.

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

A. Yes. I 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. 2012-000535 and 2013-00199), in its 2012 Environmental Compliance Plan case (Case No. 2012-00063), and in multiple cases involving Big Rivers' contracts with the City of Henderson, Kentucky and City of Henderson Utility Commission d/b/a Henderson Municipal Power & Light (Case Nos. 2016-00278, 2018-00146, and 2019-00269).

II. PURPOSE OF TESTIMONY

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

A. The purpose of my testimony is to describe the September 9, 2019 retail contract for electric service ("Retail Agreement") between Meade County Rural Electric Cooperative Corporation ("Meade") and Nucor Corporation ("Nucor") as well as the September 18, 2019 letter agreement ("Wholesale Agreement") between Big Rivers and Meade evidencing Big Rivers' concurrence with the terms of the Retail Agreement.

Q. Are you sponsoring any Exhibits?

A. Yes. I have prepared the following exhibits to my prepared testimony:

- Berry-Ex. 1 – Professional Summary
- Berry-Ex. 2 – Retail Agreement
- Berry-Ex. 3 – Wholesale Agreement
- Berry-Ex. 4 – Economic Impact Study

III. OVERVIEW OF THE SPECIAL CONTRACTS

Q. Please provide some background regarding the development of the Retail and Wholesale Agreements.

A. In January of this year, Big Rivers and Meade became aware that Nucor, the largest steel producer in the United States, was interested in expanding its Kentucky operations by constructing a new $1.35 billion state-of-the-art plate mill in Brandenburg on the Buttermilk Falls Site (the "Facility"). The contemplated Facility would include electric arc furnaces, continuous casters, rolling mills, air separation facilities, scrap and raw material processing facilities, slag processing facilities, and other facilities incidental and necessary to the production of steel.

As detailed further in Berry-Ex. 4, completion of the Facility in Kentucky would result in 400 direct jobs (at an annual average wage of $72,000), 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 ("GDP") once fully operational. Construction and capital investment associated with the contemplated facility alone is expected to temporarily create 2,349 jobs, increase incomes annually by $151.1 million, and add approximately $216 million to Kentucky's annual GDP over a two-year period.

Recognizing the substantial economic benefits associated with enticing Nucor to invest heavily in the Commonwealth, Big Rivers quickly began working on a rate arrangement that would facilitate that contemplated expansion. Throughout January and February, Big Rivers representatives met with Nucor representatives to discuss the details necessary to effectuate such an arrangement.

By March, Big Rivers, Meade, and Nucor had crafted a rate structure that all parties consider reasonable. On March 27, 2019, Governor Bevin announced that Nucor was planning on locating the Facility in Brandenburg. This is an implementation of the Governor's policy of making Kentucky the engineering and manufacturing hub of excellence in the world. Since then, Big Rivers, Meade, and Nucor have been fine-tuning the rate contracts needed to facilitate the expansion. Those contracts were finalized in September. On September 9, 2019, Meade and Nucor signed the Retail Agreement. On September 18, 2019, Meade signed the Wholesale Agreement, which outlines Big Rivers' concurrence with the terms of the Retail Arrangement.

Q. Please describe the Retail Agreement.

A. The Retail Agreement sets forth the terms and conditions of Meade's electric service to Nucor's Facility. The electric pricing set forth in that arrangement would apply from the effective date of the contract until [redacted] from the date that Nucor begins production of steel in commercial quantities at the Facility. Commercial production is required to begin no later than [redacted]. Throughout the contract term, Meade would purchase all of the electric power and energy for resale to the Facility from Big Rivers.

The Retail Arrangement would become effective once all necessary approvals associated with the special contracts are secured, all necessary permits for operation of the Facility are obtained, and the transmission system improvements required for service to the Facility are completed. The improvements necessary to serve Nucor will also provide benefits to all users of Big Rivers' transmission system by strengthening the eastern portion of Big Rivers' grid. Once those required conditions are met, Nucor would begin taking service under Big Rivers' Large Industrial Customer tariff, or its successor, including all applicable riders and taxes, but without any retail adder from Meade.

Once Nucor begins commercial production at the Facility, a different electric pricing structure would commence and would last through [redacted]. Under that structure, Nucor would pay Meade a [redacted] monthly demand charge of [redacted] for the Facility's first [redacted] of billing demand. For any monthly billing demand above the [redacted] threshold, Nucor would pay the greater of: 1) the demand charge set forth in Big Rivers' Large Industrial Customer tariff, or its successor; *or* 2) Big Rivers' out-of-pocket costs associated with each MW of excess demand. Nucor would also pay [redacted] on-peak and off-peak energy charges for all MWh consumed, [redacted] in accordance with the schedule set forth in Exhibit C of the Retail Agreement. [redacted]

Beginning [redacted] and continuing until the end of the Retail Agreement term, the Facility's rate structure would again change. [redacted]

[redacted]

[redacted]

[redacted]

Q. Are there any other aspects of the Retail Agreement that you wish to highlight?

A. Yes. Section 2.11 and Exhibit B of the Retail Agreement set forth the Termination Charge that Nucor would be required to pay if the agreement expired or was terminated. The level of that Termination Charge [redacted] throughout the Retail Agreement term.

Additionally, Section 2.14 of the Retail Agreement [redacted]

Q. Please describe the Wholesale Agreement.

A. The Wholesale Agreement reflects Big Rivers' concurrence with the terms of the Retail Agreement. The Wholesale Agreement also outlines additional rights and obligations of Big Rivers and Meade, the division of any partial payments made by Nucor, and Big Rivers' agreement to hold Meade harmless for any costs Meade incurs relating to the Retail Agreement.

Q. Why should the Retail and Wholesale Agreements be approved?

A. The rates set forth in the Agreements are reasonable. The electric pricing agreed to by the parties is expected to cover the incremental costs associated with the contemplated expansion and to result in Nucor contributing to fixed costs throughout the contract term, [redacted]

Moreover, approval of the Agreements will enable Nucor to proceed with its contemplated expansion in Kentucky, resulting in a host of economic development benefits to the Commonwealth, including approximately 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 GDP. GDP measures the health and wealth of the Kentucky economy by calculating the total value of all economic activity.

Q. Please explain the need for Commission approval of a service territory agreement with LG&E associated with the contemplated Nucor Facility.

A. Related to Nucor's contemplated expansion, Meade, Big Rivers and LG&E intend to jointly file a separate Commission proceeding for approval of an agreement and revised territorial service maps that will clarify that Nucor's Facility will be entirely located within Meade's service territory.

Q. How do the Nucor special contracts advance the goals of Big Rivers' risk mitigation plan?

A. The Nucor expansion would represent the culmination of Big Rivers' successful efforts to fulfill the risk mitigation plan Big Rivers began implementing in 2012 immediately after receiving Century Aluminum's termination notice. Over the last seven years, Big Rivers has worked diligently to offset the loss of the smelter load, entering into off-system sales agreements with Nebraska municipalities, Kentucky

Municipal Power Agency, and Owensboro Municipal Utilities in order to reduce cost for its native load customers. Should Nucor complete the contemplated expansion in Meade's service territory, Big Rivers could offset the remaining smelter load loss through increased native load sales rather than shorter-term off-system sales, achieving the ultimate goal of the mitigation plan.

Q. Does this conclude your testimony?

A. Yes, it does.

BIG RIVERS ELECTRIC CORPORATION

JOINT APPLICATION OF BIG RIVERS ELECTRIC CORPORATION AND MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION FOR APPROVAL OF CONTRACTS FOR ELECTRIC SERVICE WITH NUCOR CORPORATION.
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CASE NO. 2019-00365

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 Berry

Robert W. ("Bob") Berry

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Robert W. ("Bob") Berry on this the 17th day of October, 2019.

Katherine Ridley

Notary Public, Kentucky State at Large

My Commission Expires October 31, 2020

BERRY-EX. 1

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

BERRY-EX. 2

AGREEMENT FOR ELECTRIC SERVICE

THIS AGREEMENT FOR ELECTRIC SERVICE ("Agreement") is made and entered into as of the 9th day of September, 2019, between **MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION**, a Kentucky rural electric cooperative corporation, with its principal office located at 1351 Irvington Road, Brandenburg, Kentucky 40108 ("Seller"), and **NUCOR CORPORATION**, a Delaware corporation, with its principal office located at 1915 Rexford Road, Charlotte, North Carolina 28211 ("Customer"), for service at the steel mill facility Customer intends to construct and operate at the Buttermilk Falls Site in Brandenburg, Kentucky (the "Facility"). Seller and Customer are individually referred to herein as a "Party" and collectively as the "Parties."

WHEREAS, Seller will provide retail electric service to the Facility under the terms of this Agreement;

WHEREAS, Seller will purchase the electric power and energy for resale to Customer from Big Rivers Electric Corporation ("Big Rivers") under a Wholesale Power Contract dated June 8, 1962, as has been and may be amended from time to time (the "Wholesale Power Agreement"); and

WHEREAS, Customer is agreeable to locating the Facility in the Commonwealth of Kentucky contingent upon Seller providing the electrical requirements for the Facility under the terms of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the Parties agree as follows:

ARTICLE I
GENERAL OBLIGATIONS

1.01 Basic Obligations of the Parties. Seller shall supply, sell, and deliver to Customer, and Customer shall accept and pay for all of the electric power and energy Customer may need for the operation of the Facility, up to the Maximum Contract Demand, as defined in Section 2.03(b) of this Agreement, subject to the terms and conditions set forth herein. The electric service provided hereunder is subject to the applicable rules, regulations, and orders of the Public Service Commission of Kentucky (the "Commission"). Except as otherwise provided herein, this Agreement contains the exclusive terms on which Seller will provide electric service to Customer during the term of this Agreement and Customer will accept and pay for electric service from Seller during the term of this Agreement.

1.02 Membership. Customer shall be a member of Seller, and shall be bound by applicable rules and regulations as may from time to time be adopted by Seller.

1.03 Performance by Seller. Big Rivers shall be entitled to the benefit of each covenant undertaken by Customer in this Agreement, and Big Rivers may enforce any such covenant by action in its own name or may require Seller to enforce such covenant for and on behalf of Big Rivers.

1.04 Description of the Facility. The Facility shall consist of Customer's facilities located on or directly adjacent to the Buttermilk Falls Site utilized in the production of steel, including, but not limited to, electric arc furnaces, continuous casters, rolling mills, air separation facilities, scrap and raw materials processing facilities, slag processing facilities, and other facilities incidental and necessary to the production of steel, including customer facilities to service or process Nucor's steel.

ARTICLE II
SERVICE CHARACTERISTICS

2.01 Delivery Point and Character of Service. The "Delivery Point" of the electric power and energy made available under this Agreement shall be the point of connection of Customer's bus with Big Rivers' step-down transformers at the Brandenburg Steel Mill Substation 34.5 kV bus. The electric power and energy delivered under this Agreement will be in the form of three-phase alternating current (60 hertz) at nominal 34.5 kV voltage level.

2.02 Service Restriction. Except as provided in subsection (a) below, Customer shall not use the electric power and energy furnished hereunder as an auxiliary or supplement to any other source of power and shall not sell electric power and energy purchased hereunder.

(a) Customer-Owned Generation. Customer may self-generate power for any power requirements at the Facility beyond the Maximum Contract Demand. Any supplementary, back-up, or similar service to support any customer-owned generation, and/or the purchase of any capacity or energy from any customer-owned generation will be subject to good-faith negotiation.

2.03 Contract Demand.

(a) "Billing Demand" shall be considered equal to the [redacted] during a billing month; provided, however, that the Billing Demand for any billing month shall not be less than [redacted] of the highest measured demand in the previous twelve-month period.

(b) Customer's maximum Billing Demand in any billing month during the Term of this Agreement (the "Maximum Contract Demand") shall be [redacted] Customer may request a price quote for an increase in the Maximum Contract Demand, subject to the capability of Big Rivers' then-existing transmission facilities. Billing Demand shall not exceed Customer's Maximum Contract Demand in any billing month.

2.04 System Disturbances; Obligation for Damages.

(a) A "System Disturbance" shall be deemed to exist if the use of power by Customer directly or indirectly results in a risk of harm to human beings or material damage to or substantial interference with the functioning of Big Rivers' generating system or transmission system, Seller's distribution system, or the plant, facility, equipment or operations of any customer of one of Big Rivers' distribution cooperatives. A System Disturbance includes, but is not limited to: (i) a level of current harmonic total demand distortion ("TDD") measured at the Delivery Point that exceeds the limits on TDD described in IEEE Standard 519, Section 10; and (ii) a use of capacity and energy in such a manner that causes a current imbalance between phases greater than five percent at the Delivery Point.

(b) In its role as Local Balancing Area Operator in the Midcontinent Independent System Operator, Inc. ("MISO") and reader of the meters serving Seller, Big Rivers shall have primary responsibility for determining the existence and source of System Disturbances. If Big Rivers reasonably believes that Customer is responsible for a System Disturbance, it shall provide notice to Seller and Customer, and Customer may take, but shall not be obligated to take, appropriate action at its sole expense to cure, correct or suppress such System Disturbance. If the Customer declines for any reason to take action to correct the System Disturbance, then Seller shall undertake, or cause Big Rivers to undertake, appropriate action to cure, correct or suppress such System Disturbance. If Customer is determined to be the source of the System Disturbance, Customer shall be obligated to reimburse Seller for all reasonable costs incurred by Seller or Big Rivers to cure, correct or suppress such System Disturbance. Customer shall not be responsible to repair damage caused by, or take corrective action for, system disturbances it did not cause.

(c) Seller shall have no responsibility for damage to any property, or to any equipment or devices connected to Customer's electrical system on Customer's side of the Delivery Point that results solely from acts or omissions of Customer, its employees, agents, contractors or invitees, or malfunction of any equipment or devices connected to Customer's electrical system on Customer's side of the Delivery Point. The electric power and energy supplied under this Agreement is supplied upon the express condition that after it passes the Delivery Point it becomes the responsibility of Customer, and neither Seller nor Big Rivers shall be liable for loss or damage to any person or property whatsoever, resulting directly or indirectly from the use, misuse or presence of said electric power and energy on Customer's premises, or elsewhere, after it passes the Delivery Point except where such loss or damage shall be shown to have been occasioned by negligence of Seller or Big Rivers, their agents or employees.

2.05 Power Factor. Customer shall maintain a power factor at the Delivery Point as nearly as practicable to unity. Power factor during normal operation may range from unity to ninety percent (90%). If Customer's power factor is less than 90% at time of maximum load, Seller reserves the right to require Customer to choose either (a) installation at Customer's expense of equipment which will maintain a power factor of 90% or higher; or (b) adjustment of the maximum monthly metered demand for billing purposes in accordance with the following formula:

$$\frac{\text{Maximum Actual Measured Kilowatts} \times 90\%}{\text{Power Factor (\%)}}$$

2.06 Metering.

(a) The metering equipment necessary to register the electric demand and energy for this service shall be furnished, installed, operated, and maintained by Seller or Big Rivers, and shall be and remain the property of Seller or Big Rivers.

(b) Each meter shall be read on or about the first day of each month, or such other day as the Parties may mutually agree upon, by a representative of Seller and may be simultaneously read by a representative of Customer should Customer so elect.

(c) All inspections and testing of metering equipment shall be performed in accordance with the Commission's applicable rules and regulations.

(d) All meters utilized for the purpose of calculating Customer's billing determinants shall be totalized for billing purposes.

2.07 Easements and Facilities Provided by Customer.

(a) Customer shall furnish, operate, and maintain (or cause to be furnished, operated, and maintained) such facilities and equipment as may be necessary to enable it to receive and use electric power and energy purchased hereunder at and from the Delivery Point.

(b) Customer shall provide or cause to be provided, without cost to Seller or Big Rivers, the following facilities which are or may be necessary for Seller or Big Rivers to supply the electric consuming facilities of Customer with retail electric service:

(i) Adequate sites for the construction and erection of such new substations and other facilities and future alterations to such new facilities as may from time to time be necessary to serve Customer, at such locations and of such dimensions as mutually agreed upon with the fee simple title thereto, rough graded to Seller's or Big Rivers' requirements, as may be from time to time required by Seller or Big Rivers;

(ii) Easements for rights-of-way upon Customer's property, at such locations and of such dimensions as determined by Seller and which are necessary for the construction of facilities which Seller or Big Rivers must furnish to provide electric service under this Agreement. If Customer wishes to move any such facilities in the future, Seller will cooperate in identifying alternate satisfactory locations so long as any relocation is at Customer's expense;

(iii) An easement for ingress and egress for the exercise by Seller or Big Rivers of Seller's rights under this Agreement; and

(iv) Facilities for Big Rivers' metering equipment.

2.08 [redacted]

(a) [redacted]

(b) [redacted]

2.09 Operation and Maintenance of Facilities.

(a) Seller shall construct, operate, and maintain, or cause to be constructed, operated, and maintained, all facilities and equipment owned by it or by Big Rivers and required to supply retail electric service to Customer in accordance with the terms of this Agreement.

(b) Customer shall construct, operate, and maintain, or cause to be constructed, operated, and maintained, all facilities and equipment owned by it in accordance with the applicable provisions of the National Electrical Safety Code and all other applicable laws, codes, and regulations; provided, however, that Seller shall have no duty to inspect such facilities for compliance therewith.

(c) Nothing in this Agreement shall be construed to render either Party liable for any claim, demand, cost, loss, cause of action, damage, or liability of whatsoever kind or nature arising out of or resulting from the construction, operation, or maintenance of such Party's electric system or electric systems connected to such Party's electric system.

2.10 Right of Removal. Any and all equipment, apparatus, devices, or facilities placed or installed, or caused to be placed or installed, by either Party on or in the premises of the other Party shall be and remain the property of the Party owning and installing such equipment, apparatus, devices, or facilities regardless of the mode or manner of annexation or attachment to real property of the other. Upon the termination of this Agreement, the owner thereof shall have the right to enter upon the premises of the other and shall within a reasonable time remove such equipment, apparatus, devices, or facilities.

2.11 Termination Charge. If this Agreement expires or is terminated for any reason, Customer shall pay Seller, in addition to any other obligations Customer may have to Seller upon the expiration or termination of this Agreement, a "Termination Charge" in accordance with Exhibit B hereto.

2.12 Credit Support for Termination Charge. If Customer's Credit Rating falls below a rating of [redacted] from Standard & Poor's Rating Group ("S&P") or Fitch Ratings, Inc. ("Fitch"), or below [redacted] from Moody's Investor Services, Inc. ("Moody's"), then within fifteen (15) calendar days of such downgrade event, Customer shall provide an irrevocable bank standby letter of credit acceptable to Seller and Big Rivers, or other credit support acceptable to Seller and Big Rivers, as security for payment of the Termination Charge. "Credit Rating" means, on any date of determination, the rating then assigned to Customer's unsecured, senior long-term debt or deposit obligations (not supported by third party credit enhancements) by S&P, Moody's, or Fitch, or their successors, or if Customer does not have a rating for its unsecured, senior long-term debt or deposit obligations, then the rating then assigned to Seller as its issuer rating by S&P, Moody's, or Fitch, or their successors.

2.13 Ancillary Services; Transmission. Seller shall be responsible for procuring transmission and ancillary services needed to deliver capacity and energy to Customer under this Agreement, subject to the rates and other terms hereunder.

2.14 Curtailment; Interruption. [redacted]

ARTICLE III
PAYMENT

3.01 Rates. During the Term of this Agreement, Customer shall take service from Seller at the rates set forth in Exhibit C hereto and under Seller's Rate Schedule 13, as it may be amended from time to time, and any other applicable tariffs of Seller, or any successor tariff(s), all of which are incorporated herein by reference. A copy of Seller's current Rate Schedule 13 is attached hereto as Exhibit D. Seller shall take service from Big Rivers under Big Rivers' proposed Large Industrial Customer Expansion Rate tariff, in substantially the form attached hereto as Exhibit E, which tariff Big Rivers will seek all necessary approvals to implement, as such tariff may be amended from time to time, and any other applicable tariffs of Big Rivers, or any successor tariff(s), all of which are incorporated herein by reference. Notwithstanding the foregoing, to the extent any provision of this Agreement, including the exhibits hereto, are inconsistent with the tariffs referenced in this section, the provisions of the Agreement shall prevail.

3.02 Taxes. Customer shall pay all taxes, charges, or assessments now or hereafter applicable to electric service hereunder.

3.03 Billing. Bills for service hereunder shall be paid electronically or at the office of the Seller as follows:

Meade County RECC
1351 Irvington Road,
P.O. Box 489
Brandenburg, Kentucky 40108

Such payments shall be due on the 15th day of each month for service furnished during the preceding monthly billing period (the "Due Date"). If payment in full is not paid on or before the Due Date, or if Customer fails to maintain adequate credit support or payment security as required hereunder, Seller may discontinue service to the Customer without further action on the part of Seller by giving the Customer written notice at least ten (10) calendar days in advance of its intention to do so; provided, however, that such discontinuance of service shall not relieve the Customer of any of its obligations under this Agreement or limit Seller's other remedies under this Agreement. Simple interest equal to the then-effective prime commercial lending rate as published in the "Money Rates" section of *The Wall Street Journal* plus one percent (1%) shall apply to any unpaid amounts from the Due Date until paid.

In the event any portion of the bill is in bona fide dispute, as a result of metering-related issues or otherwise, Customer shall notify Seller on or before the Due Date of the disputed amount and the reason therefor and shall pay the undisputed amount. The parties shall attempt in good faith to resolve the dispute. If the Parties are unable to agree upon a correct amount within ten (10) calendar days of Customer's written notice of the dispute, then the disputed amount shall become due on the later of the Due Date or the end of that ten (10) day period.

3.04 Credit Support for Monthly Billing Obligations

(a) Customer shall provide, prior to the Service Commencement Date defined in Section 11.01, an irrevocable bank standby letter of credit representing [redacted] of estimated billing, being the amount of [redacted], as security for the payment of its monthly billing obligations. In the event customer fails to pay any monthly billing invoice by the Due Date, after notifying Customer of its intent to do so Seller may, in addition to and without limiting any other remedies available to it, call on the standby letter of credit provided in this subsection or any other security deposit, payment security, or credit support on any other agreement between Customer and Seller for payment provided by Customer to satisfy any unpaid invoices.

(b) In addition to the rights and obligations in Section 3.04(a), in the event Customer fails to pay any monthly billing invoice by the Due Date, or Customer's credit rating falls below [redacted] from S&P or Fitch, or below [redacted] from Moody's, then Customer shall provide an irrevocable bank standby letter of credit representing [redacted] of estimated billing, being the amount of [redacted], as security for payment of its monthly billing obligation, within 15-calendar days of such event. If Customer fails to pay any invoice for service by the Due Date, after notifying Customer of its intent to do so Seller may, in addition to and without limiting any other remedies available to it, call on the standby letter of credit provided for in this subsection or any other security deposit, payment security, or credit support on any other agreement between Customer and Seller for payment provided by Customer to satisfy that unpaid invoice.

ARTICLE IV
CONTINUITY OF SERVICE

4.01 Continuity of Service. Seller shall use reasonable diligence to provide a constant and uninterrupted supply of electric power and energy hereunder. However, Seller does not guarantee uninterrupted service, and neither Seller nor Big Rivers shall be responsible for damages to Customer occasioned by any failure, shortage, or interruption of service for any reason, including but not limited to those resulting from maintenance work, inability to secure right-of-way, or from a Force Majeure Event, as defined in Section 4.02 of this Agreement.

4.02 Force Majeure. In the event a Party's performance of this Agreement is limited or prevented in whole or in part by Acts of God, strikes, labor trouble, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of the government (whether federal, state, or local, or civil or military), civil disturbances, explosions, breakage of or accident to machinery, equipment or transmission lines, or inability to obtain necessary materials, supplies, or permits due to existing or future rules, regulations, orders, laws or proclamations of governmental authorities (whether federal, state, or local, or civil or military), or any other cause beyond the reasonable control of the Parties hereto whether or not specifically provided herein (each a "Force Majeure Event"), the obligations (other than payment obligations) of both Parties shall be suspended to the extent made necessary by such Force Majeure Event; provided that the affected Party gives notice and reasonably full particulars of such Force Majeure Event, first by telephone and then confirmed in writing, to the other Party within a reasonable time after the occurrence of the Force Majeure Event. Each Party will, in the event it experiences a Force Majeure Event, use all commercially reasonable efforts to eliminate the effects of such Force Majeure Event on its performance as soon as reasonably possible; provided that nothing contained herein may be construed to require a Party to prevent or to settle a labor dispute against its will.

ARTICLE V
RIGHT OF ACCESS

5.01 Duly authorized representatives of the Seller shall be permitted to enter the Customer's premises at all reasonable times in order to carry out the provisions hereof.

5.02 Customer shall furnish to Seller such reports and information concerning the matters addressed in or matters arising out of this Agreement or any exhibit hereto as the Seller may reasonably request from time to time.

ARTICLE VI
EVENTS OF DEFAULT AND REMEDIES

6.01 Events of Default. Each of the following constitutes an "Event of Default" under this Agreement:

(a) Failure by Customer to make any payment in accordance with this Agreement;

(b) Failure of a Party to perform any material duty imposed on it by this Agreement, including but not limited to the failure to maintain adequate credit support as required in Sections 2.12 and 3.04;

(c) Any attempt by a Party to transfer an interest in this Agreement other than as permitted pursuant to Section 10.01;

(d) Any filing of a petition in bankruptcy or insolvency, or for reorganization or arrangement under any bankruptcy or insolvency laws, or voluntarily taking advantage of any such laws by answer or otherwise, or the commencement of involuntary proceedings under any such laws by a Party and such petition has not been withdrawn or dismissed within 60 days after filing;

(e) Assignment by a Party for the benefit of its creditors; or

(f) Allowance by a Party of the appointment of a receiver or trustee of all or a material part of its property and such receiver or trustee has not been discharged within 60 days after appointment.

6.02 Remedies. Following the occurrence and during the continuance of an Event of Default by either Party, the non-defaulting Party may, in its sole discretion, elect to terminate this Agreement upon written notice to the other Party, or to seek enforcement of its terms at law or in equity. Remedies provided in this Agreement are cumulative. Nothing contained in this Agreement may be construed to abridge, limit, or deprive either Party of any means of enforcing any remedy either at law or in equity for the breach or default of any of the provision herein, except as provided in Section 6.03 of this Agreement.

6.03 LIMITATION OF DAMAGES. EXCEPT AS EXPRESSLY PROVIDED OTHERWISE IN THIS AGREEMENT, UNDER NO CIRCUMSTANCES WILL CUSTOMER OR SELLER (OR ITS WHOLESALE POWER SUPPLIER), OR THEIR RESPECTIVE AFFILIATES, DIRECTORS, OFFICERS, MEMBERS, MANAGERS, EMPLOYEES OR AGENTS BE LIABLE HEREUNDER, WHETHER IN TORT, CONTRACT, OR OTHERWISE, FOR ANY SPECIAL, INDIRECT, PUNITIVE EXEMPLARY, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS. CUSTOMER'S OR SELLER'S LIABILITY (AND THE LIABILITY OF ITS WHOLESALE POWER SUPPLIER) HEREUNDER SHALL BE LIMITED TO DIRECT, ACTUAL DAMAGES. THE EXCLUSION OF ALL OTHER DAMAGES SPECIFIED IN THIS SECTION IS WITHOUT REGARD TO THE CAUSE OR CAUSES RELATING THERETO. THIS PROVISION WILL SURVIVE THE TERMINATION OF THIS AGREEMENT.

6.04 Survival. Obligations of a Party accrued under this Agreement on or before the date this Agreement is terminated or otherwise expires shall survive that termination or expiration.

ARTICLE VII
INDEMNIFICATION

7.01 Parties agree to indemnify and hold the other Party and Big Rivers harmless from and against any and all claims, demands, damages, judgments, losses or expenses asserted against the other Party and/or Big Rivers arising out of, related to or concerning damage to Big Rivers' generation or transmission facilities or the transmission facilities of any other entity resulting from Party's operations, activities, or usage of electric power and energy hereunder, unless said claim, demand, damage, judgments, losses or expenses arise out of the sole negligence or intentional misconduct of the Party or Big Rivers. Additionally, Parties assume all responsibility for the electric service at and from the Party's side of the Delivery Point of electricity and for the wires and equipment used in connection therewith, and will indemnify and hold the other Party and Big Rivers harmless from any and all claims for injury or damage to persons or property occurring at and from the Party's side of the Delivery Point of electricity, occasioned by such electricity or said wires and equipment, except where said injury or damage is occasioned solely by the negligence or intentional misconduct of the Party or Big Rivers.

ARTICLE VIII
NOTICE

8.01 Except as herein otherwise expressly provided, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, shall be in writing and shall be deemed properly served, given or made if delivered in person or by any qualified and recognized delivery service, or sent postage prepaid by United States certified mail, return receipt requested, to the persons specified below unless otherwise provided for in this Agreement.

TO CUSTOMER:

Controller
Nucor Steel Brandenburg
Brandenburg, Kentucky

TO SELLER:

President and CEO
Meade County Rural Electric Cooperative Corporation
1351 Irvington Road
Brandenburg, Kentucky 40108
Telephone: (270) 422-2162

Any notice from Customer to Seller shall be given concurrently to Big Rivers, using the same methods of delivery required by this Agreement for notice to Seller, at the following address:

President and CEO
Big Rivers Electric Corporation
201 Third Street
Henderson, Kentucky 42420
Telephone: (270) 827-2561

Each Party shall have the right to change the name of the person or location to whom or where notice shall be given or served by notifying the other Party of such change in accordance with this section.

ARTICLE IX
REPRESENTATIONS AND WARRANTIES

9.01 Representations of Seller. Seller hereby represents and warrants to Customer as follows:

(a) Seller is an electric cooperative corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligations hereunder, and to carry on its business as such business is now being conducted and as is contemplated hereunder to be conducted during the term hereof.

(b) The execution, delivery, and performance of this Agreement by Seller have been duly and effectively authorized by all requisite corporate action.

9.02 Representations and Warranties of Customer. Customer hereby represents and warrants to Seller as follows:

(a) Customer is a corporation duly organized and validly existing and in good standing under the laws of the State of Delaware, is authorized to do business in the Commonwealth of Kentucky, and has the power and authority to execute and deliver this Agreement, to perform its obligations hereunder, and to carry on its business as such business is now being conducted and as is contemplated hereunder to be conducted during the term hereof.

(b) The execution, delivery, and performance of this Agreement by Customer have been duly and effectively authorized by all requisite corporate action.

(c) The rates offered to Customer and incorporated into this Agreement were a necessary factor in the decision of Customer to locate its operations in Kentucky. Customer estimates that its Facility will involve a capital investment of approximately $1.35 Billion, and employment of approximately 400 full-time persons.

ARTICLE X
SUCCESSION AND APPROVAL

10.01 Neither Party shall assign its rights hereunder without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, either Party may withhold approval of a proposed assignment until it has been provided with all information it may reasonably require regarding the proposed assignee, and it has determined that the proposed assignee has the ability to fulfill assignor's obligations hereunder to the reasonable satisfaction of the Party following the proposed assignment. No assignment by a Party shall relieve the assignor of its obligations hereunder without the written consent of the other Party to accept the assignee as a substitute obligor.

ARTICLE XI
TERM AND SERVICE COMMENCEMENT DATE

11.01 This Agreement shall become effective upon the satisfaction or waiver of the contingencies referred to in Section 12.01 of this Agreement, and shall remain in effect for [redacted] following the Service Commencement Date, as defined in this section (the "Term"). "Service Commencement Date" shall mean the date on which Customer commences production of steel in commercial quantities, and such date shall be specified by Customer, but shall be no later than [redacted] Prior to the expiration of the Term, the Parties shall negotiate in good faith with the goal of concluding a replacement power supply agreement.

ARTICLE XII
SUCCESSION, APPROVAL, AND EFFECTIVE DATE

12.01 The "Effective Date" of this Agreement shall be the date hereof, except that said Effective Date shall be postponed and this Agreement shall not become effective unless and until:

(a) all necessary approvals, including approvals of this Agreement, a corresponding amendment to the Wholesale Power Agreement, and Big Rivers' proposed Large Industrial Customer Expansion Rate tariff, are received from (i) the boards of directors of Seller, Customer, and Big Rivers; (ii) the Commission; and (iii) the Rural Utilities Service ("RUS"); or the Parties and Big Rivers waive such approvals;

(b) Seller has completed or caused to be completed the transmission system improvements, and has secured or caused to be secured the transmission service required for service to Customer hereunder; and

(c) Customer has obtained the necessary permits for operation of the Facility.

ARTICLE XIII
MISCELLANEOUS

13.01 Entire Agreement. The terms, covenants, and conditions contained in this Agreement, including the attached exhibits, constitute the entire agreement between the Parties and shall supersede all previous communications, representations, or agreements, either oral or written between the Parties hereto with respect to the subject matter hereof; provided, however, that service to Customer is subject to the articles, bylaws, tariffs, rules, and regulations of Seller and to the laws, rules, regulations, and lawful orders of the Commission. In the event of a conflict between this Agreement and the articles, bylaws, tariffs, rules, and regulations of Seller, this Agreement shall take precedence.

13.02 Governing Law, Jurisdiction, and Venue. All respective rights and obligations of the Parties shall be governed by the laws of the Commonwealth of Kentucky without regard to its conflicts of law rules. The courts of the Commonwealth of Kentucky will have exclusive jurisdiction over each and every judicial action brought under or in relationship to this

Agreement; provided that the subject matter of such dispute is not a matter reserved by law to the Commission (in which event exclusive jurisdiction and venue will lie with the Commission), or to the U.S. federal judicial system (in which event exclusive jurisdiction and venue will lie with the U.S. District Court for the Western District of Kentucky), and the Parties shall submit to the jurisdiction of Kentucky courts for such purpose. Venue of any state court action, legal or equitable, having as its basis the enforcement or interpretation of this contract, shall be Henderson County, Kentucky.

13.03 Waiver. The waiver by either Party of any breach of any term, covenant, or condition contained herein will not be deemed a waiver of any other term, covenant, or condition, nor will it be deemed a waiver of any subsequent breach of the same or any other term, covenant, or condition contained herein.

13.04 Amendments. This Agreement may be amended, revised, or modified by, and only by, a written instrument duly executed by both Parties and consented to by Big Rivers.

13.05 Counterparts. This Agreement may be executed in any number of counterparts, which together will constitute but one and the same instrument, and each counterpart will have the same force and effect as if they were one original.

13.06 Headings. The headings contained in this Agreement are solely for convenience and do not constitute a part of the agreement between the Parties, nor should such headings be used to aid in any manner in the construction of this Agreement.

13.07 Severability. Should any provision or provisions of this Agreement be declared void or illegal by any court of competent jurisdiction, then such void or illegal provision or provisions shall be severed from this Agreement, and all other provisions hereof shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement all as of the day and year first above written.

MEADE COUNTY RURAL ELECTRIC
COOPERATIVE CORPORATION

By: Martin Littrel
Martin Littrel
President and CEO

NUCOR CORPORATION

By: Johnny Jacobs
Johnny Jacobs
Vice President and General Manager

EXHIBIT A

[redacted]

[redacted]

[redacted]

[redacted]

EXHIBIT B

TERMINATION CHARGE

The Termination Charge shall be equal to Big Rivers' actual cost of the transmission and other facilities ("Transmission Facilities Costs") constructed to provide service to Customer, which amount is estimated to be [redacted] as of July 3, 2019, reduced in accordance with the following schedule:

[redacted]

Transmission Facilities Costs shall include costs incurred by Big Rivers prior to the Effective Date of this Agreement for which Customer has accepted financial responsibility under the letter agreement between Customer and Big Rivers dated May 1, 2019.

EXHIBIT C

RATES

During the Term of the Agreement, Customer shall take service from Seller under Seller's Rate Schedule 13, and Seller shall take service from Big Rivers under Big Rivers' Large Industrial Customer Expansion Rate tariff for service to Customer, as such tariffs may be amended from time to time, and any other applicable or successor tariffs; provided, however, that the following Special Contract Rates shall apply to service to Customer in lieu of any other rates in such tariffs unless provided otherwise:

A. Beginning on the Effective Date hereof (as defined in Section 12.01 of the Agreement) and continuing through the Service Commencement Date (as defined in Section 11.01 of the Agreement), Customer shall pay Seller for service hereunder upon the rates, terms, and conditions set forth in Big Rivers' Large Industrial Customer tariff, or any successor tariff, subject to such changes as may become effective from time to time by operation of law or by order of the Commission, including all applicable riders, but without any retail adder from Seller, plus applicable taxes. A copy of Big Rivers' current Large Industrial Customer tariff is attached to the Agreement as Exhibit F.

B. From the Service Commencement Date, through [redacted], Customer shall pay Seller:

   1. a monthly Demand Charge of [redacted] of Billing Demand for all MW up to the Maximum Contract Demand, including any increase in the Maximum Contract Demand pursuant to Section 2.03(b) of the Agreement; plus

   2. a monthly Demand Charge equal to the greater of (i) the Demand Charge set forth in Big Rivers' Large Industrial Customer tariff, or any successor tariff, subject to such changes as may become effective from time to time by operation of law or by order of the Commission, or (ii) Big Rivers' out-of-pocket costs for all MW in excess of the Maximum Contract Demand; plus

   3. an On-Peak Energy Charge for all MWh consumed during On-Peak Hours during the billing month, plus an Off-Peak Energy Charge for all MWh consumed during Off-Peak Hours, in accordance with the following table:

	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
On-Peak Energy Charge ($ per MWh)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Off-Peak Energy Charge ($per MWh)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

4. "On-Peak Hours" shall be from 8:00 a.m. to 8:00 p.m., Eastern prevailing time, Monday-Friday, excluding NERC holidays. All other hours are "Off-Peak Hours."

5. [redacted]

C. On and after [redacted] and through the end of the Term, Customer will take service from Seller under the following pricing structure:

[redacted]

[redacted] [redacted]

[redacted]

[redacted]

[redacted]

EXHIBIT D

SELLER'S CURRENT RATE SCHEDULE 13

Exhibit D

FOR Entire territory served
Community, Town or City
P.S.C. No. 41
(Original) Sheet No. 60
(Revised)

MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION

Canceling P.S.C. No.
(Original) Sheet No. 42
(Revised)

Schedule 13	CLASSIFICATION OF SERVICE	
Large Industrial Customers Served Under Special Contract For All Load Subject To The Big Rivers Large Industrial Customer Expansion Rate		RATE PER UNIT

Availability
This rate shall apply to those power requirements of any large consumer with load subject to service under terms and conditions set forth in the Large Industrial Customer Expansion Rate of Big Rivers Electric Corporation. This rate shall cease to be available should Big Rivers Large Industrial Expansion Rate be discontinued.

Conditions of Service

Service hereunder shall be subject to the following conditions:

1. The consumer must execute a written contract for electric service, or amend an existing contract; and
2. The consumer's service characteristics must qualify all or some portion of the consumer's load for service under the Big Rivers Large Industrial Customer Expansion Tariff; and
3. It shall be the responsibility of the consumer to coordinate through the Cooperative or its authorized agent all transactions that the Cooperative must make on behalf of the customer pursuant to the Big Rivers Large Industrial Customer Expansion Tariff.

Monthly Rate

A. Wholesale Power Cost:

An amount equal to all the monthly charges levied by Big Rivers pursuant to the Big Rivers Large Industrial Customer Expansion Rate for wholesale electric service (including transmission service) hereunder.

B. Retail Adders:

Retail Adders shall be determined on a case by case basis for that portion of each consumer's load served under this tariff.

DATE OF ISSUE August 21, 2013
Month/Date/Year
DATE EFFECTIVE August 20, 2013
Month/Date/Year
ISSUED BY [signature] Rates are subject to change and refund at the conclusion of Case No. 2013-00033
(Signature of Officer)
TITLE President / CEO

BY AUTHORITY OF ORDER OF THE PUBLIC SERVICE COMMISSION IN CASE NO. 2013-00033 DATED 8/20/13

KENTUCKY
PUBLIC SERVICE COMMISSION
JEFF R. DEROUEN
EXECUTIVE DIRECTOR
TARIFF BRANCH
Bunt Kirtley
EFFECTIVE
8/20/2013
PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

EXHIBIT E

BIG RIVERS' PROPOSED LARGE INDUSTRIAL CUSTOMER EXPANSION RATE TARIFF

Big Rivers ELECTRIC CORPORATION

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

Original SHEET NO. 30.01

CANCELLING P.S.C. KY. No. ____________

____________ SHEET NO. ____________

RATES, TERMS AND CONDITIONS – SECTION 1

STANDARD RATE – LICX – Large Industrial Customer Expansion [N]

Applicable:

In all territory served by Big Rivers' transmission system.

Availability:

This schedule is available to any of the Member Cooperatives of Big Rivers for service to certain large industrial or commercial loads as follows:

(1) To purchases made by a Member Cooperative for service to any New Customer initiating service after ________, 2019, including New Customers with a QF as defined in Rate Schedule QFP, that either initially contracts for fifty (50) MWs or more of capacity or whose aggregate peak load at any time amounts to fifty (50) MWs or greater (including any later increases to such load) in which case the entire load shall be thereafter subject to this rate schedule.

(2) To purchases made by a Member Cooperative for expanded load requirements of Existing Customers, including Existing Customers with a QF as defined in Rate Schedule QFP, where:

(i) the customer was in existence and served under the then-effective Big Rivers Rate Schedule LIC any time during the Base Year *and*,

(ii) the expanded load requirements are increases in peak load which in the aggregate result in a peak demand which is at least fifty (50) MWs greater than the customer's Base Year peak demand.

DATE OF ISSUE month dd, 2019
DATE EFFECTIVE month dd, 2019

/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 – LICX – Large Industrial Customer Expansion – (*continued*) [N]

Availability (*continued*):

(3) To purchases made by a Member Cooperative for the expanded load requirements of Existing Customers, including Existing Customers with a QF as defined in Rate Schedule QFP, where:

(i) the customer's load was in existence and served under the then-effective Big Rivers Rate Schedule RDS;

(ii) the expanded load requirements are increases in peak load which in aggregate result in a peak demand which is at least fifty (50) MWs greater than the customer's Base Year peak demand; *and*

(iii) the customer requires service through a dedicated delivery point.

For all loads meeting the availability criteria above, no other Big Rivers tariff rate will be available. As an alternative to this rate schedule, the Member Cooperative may negotiate a "Special Contract Rate" with Big Rivers for application on a case by case basis for loads meeting the availability criteria above.

To receive service hereunder, the Member Cooperative must:

(1) Obtain from the customer an executed written contract or amend an existing contract, for electric service hereunder with terms acceptable to Big Rivers.

(2) Enter into a contract with Big Rivers, or amend an existing contract with Big Rivers, to specify the terms and conditions of service between Big Rivers and the Member Cooperative regarding power supply for the customer.

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

Rates and Charges:

Each month, each Member Cooperative shall be required to pay separately for each of its customers taking service under this tariff, in each case using that individual customer's contract demand (if any) or metered demand, as applicable.

For all delivery points served under this tariff, a Monthly Delivery Point Rate consisting of *the sum of the following*:

(1) Expansion Demand and Expansion Energy Rates:
The Expansion Demand rates, Expansion Energy rates, or both shall be established to correspond to the actual costs of power purchased by Big Rivers from Third-Party Suppliers selected by Big Rivers from which Big Rivers procures the supply and delivery of the type and quantity of service required by the Member Cooperative for resale to its customer. Such monthly costs shall include *the sum of all Third-Party Supplier charges*, including –

- (i) capacity and energy charges, charges to compensate for transmission losses on Third-Party transmission systems,
- (ii) all transmission and ancillary services charges on Third-Party transmission systems paid by Big Rivers to purchase such Expansion Demand and Expansion Energy and have it delivered to Big Rivers' transmission system, *and*
- (iii) all MISO expenses and costs.

(2) Expansion Demand Transmission Rate:
Big Rivers shall assess unbundled charges for network transmission service on the Big Rivers Transmission System according to the rates in the OATT applied to each kW taken as Expansion Demand.

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. 30.04

CANCELLING P.S.C. KY. No.

SHEET NO.

RATES, TERMS AND CONDITIONS – SECTION 1

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

Rates and Charges (*continued*):

(3) Ancillary Services Rates for Expansion Demand and Expansion Energy:
Big Rivers shall assess unbundled rates for all ancillary services required to serve load served under this schedule. Big Rivers shall supply the following six ancillary services as defined and set forth in the OATT –

(i) Scheduling System Control and Dispatch;
(ii) Reactive Supply and Voltage Control from Generation Sources Services;
(iii) Regulation and Frequency Response Service;
(iv) Energy Imbalance Service;
(v) Operating Reserve - Spinning Reserve Service; *and*
(vi) Operating Reserve - Supplemental Reserve Service.

(4) Big Rivers Adder:
In addition to the charges contained in Items (1), (2), and (3) of this Rates and Charges section, Big Rivers shall charge an adder determined on a case by case basis.

Metering:

Big Rivers shall provide an appropriate meter to all delivery points of Large Industrial Customer delivery point customers served under this rate schedule.

DATE OF ISSUE month dd, 2019
DATE EFFECTIVE month dd, 2019

/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 – LICX – Large Industrial Customer Expansion – (*continued*) [N]

Definitions:

Please sec Section 4 for definitions common to all tariffs.

Definitions specific to this rate schedule are:

(1) "Base Year" shall mean the twelve (12) calendar months from _______ 2018 through _______ 2019.

(2) "Existing Customer" shall mean any customer of a Member Cooperative served as of _____________, 2019.

(3) "New Customer" shall mean any customer of a Member Cooperative commencing service on or after __________, 2019.

(4) "Special Contract Rate" shall mean a rate negotiated with a Member Cooperative to serve the load requirements of a New Customer or an Existing Customer.

(5) "Expansion Demand" and "Expansion Energy" *for the load requirements of a New Customer* shall be the Member Cooperative's total demand and energy requirements for the New Customer, including amounts sufficient to compensate for losses on the Big Rivers transmission system as set forth in the OATT.

(6) "Expansion Demand" *for the expanded local requirements of an Existing Customer* shall be the amount in kW by which the customer's Billing Demand ***exceeds*** the customer's Base Year peak demand, ***plus*** an additional amount of demand sufficient to compensate for losses on the Big Rivers transmission system as set forth in Big Rivers' OATT. *In those months in which there is Expansion Demand*, "Expansion Energy" shall be the amount in kWh by which the customer's kWh usage for the current month ***exceeds*** the customer's actual kWh usage for the corresponding month of the Base Year, ***plus*** an additional amount of kWh sufficient to compensate for losses on the Big Rivers transmission system as set forth in the OATT.

[N]

STANDARD RATE – LICX – Large Industrial Customer Expansion
Billing Form

BIG RIVERS ELECTRIC CORP	INVOICE P. O. BOX 24 MONTH ENDING mm/dd/yy	HENDERSON, KY 42419-0024

TO: LARGE INDUSTRIAL CUSTOMER EXPANSION
DELIVERY POINTS

ACCOUNT
SERVICE FROM mm/dd/yy THRU mm/dd/yy
USAGE

USAGE	DEMAND	TIME	DAY	METER	MULT	KW DEMAND
		00:00 A (or P)	mm/dd		1000	00,000

POWER FACTOR	BASE	PEAK	AVERAGE		KW DEMAND BILLED
EXPANSION DEMAND	00.00%	00.00%	00.00%		000,000

ENERGY	PREVIOUS	PRESENT	DIFFERENCE	MULT	KWH USED
EXPANSION ENERGY	00000.000	00000.000	0000.000	1000	00,000,000

EXPANSION DEMAND & EXPANSION ENERGY

EXPANSION DEMAND, INCLUDING LOSSES	kW	TIMES	$	EQUALS	$
P/F PENALTY	kW	TIMES	$	EQUALS	$
EXPANSION ENERGY, INCLUDING LOSSES	kWh	TIMES	$	EQUALS	$
OTHER EXPANSION SERVICE CHARGES				EQUALS	$
SUBTOTAL					$

EXPANSION DEMAND TRANSMISSION

LOAD RATIO SHARE OF NETWORK LOAD	$

EXPANSION DEMAND & EXPANSION ENERGY ANCILLARY SERVICES

SCHEDULING SYSTEM CONTROL & DISPATCH SERVICE	$
REACTIVE SUPPLY & VOLTAGE CONTROL FROM GENERATION SOURCES SERVICE	$
REGULATION & FREQUENCY RESPONSIVE SERVICE	$
ENERGY IMBALANCE SERVICE	$
OPERATING RESERVE – SPINNING RESERVE SERVICE	$
OPERATING RESERVE – SUPPLEMENTAL RESERVE SERVICE	$
SUBTOTAL	$

BIG RIVERS ADDER

EXPANSION DEMAND	kW	TIMES	$	EQUALS	$

TOTAL AMOUNT DUE $

---------- LOAD FACTOR ----------		
ACTUAL	BILLED	MILLS PER KWH
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 month dd, 2019
DATE EFFECTIVE month dd, 2019

/s/ Robert W. Berry

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

EXHIBIT F

BIG RIVERS' CURRENT LARGE INDUSTRIAL CUSTOMER TARIFF

Big Rivers

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

Original SHEET NO. 26

CANCELLING P.S.C. KY. No. 26

Original SHEET NO. 25

RATES, TERMS AND CONDITIONS – SECTION 1

STANDARD RATE – LIC – Large Industrial Customer

Applicable:

In all territory served by Big Rivers' transmission system.

Availability:

This schedule is available to any of Big Rivers' then existing Member Cooperatives for service to Large Industrial Customers served using dedicated delivery points. Retail service by a Member Cooperative to a Large Industrial Customer served using a dedicated delivery point shall be provided pursuant to the terms of a written retail service agreement which shall be subject to Big Rivers' approval.

Term:

This rate schedule shall take effect at 12:01 AM CPT on the effective date of this tariff.

Rates:

Rates Separate for Each Large Industrial Customer:

Each month each Member Cooperative shall be required to pay separately for each of its qualifying Large Industrial Customers taking service under this tariff, in each case using that individual Large Industrial Customer contract demand (if any) or metered demand, as applicable.

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)

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. 27
CANCELLING P.S.C. KY. No. 26
Original SHEET NO. 26

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

For all Large Industrial Customer delivery points, a Monthly Delivery Point Rate consisting of:

A Demand Charge of:
All kW of billing demand at $10.7150 per kW. [R]

Plus,

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

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

Charges:

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

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

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

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
Bunt Kirtley
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2/1/2014
PURSUANT TO 807 KAR 5:011 SECTION 9 (1)

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

Billing:

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

Big Rivers

(Name of Utility)

For All Territory Served By
Cooperative's Transmission System
P.S.C. KY. No. 27

Original SHEET NO. 29

CANCELLING P.S.C. KY. No. 26

Original SHEET NO. 28

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

Bill Format [T]

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

BIG RIVERS ELECTRIC CORPORATION		INVOICE P. O BOX 24 MONTH ENDING mm/dd/yy		HENDERSON, KY 42419-0024		
TO: Member's Name		ACCOUNT				
SUBSTATION			SERVICE FROM:	mm/dd/yy	THRU	mm/dd/yy
SERVICE FROM: mm/dd/yy	THRU	mm/dd/yy		BILLED PEAK	mm/dd	time
USAGE DEMAND	TIME 00:00 A (or P)	DAY mm/dd	METER	MULT. 1,000		KW DEMAND 00,000
POWER FACTOR	BASE 00.00%	PEAK 00.00%	AVERAGE 00.00%	BILLED PEAK		
ENERGY	PREVIOUS 00000.000	PRESENT 00000.000	DIFFERENCE 00000.000	MULT. 1,000		KWH / USED 00,000,000
ACTUAL DEMAND	0,000	KW times	$00 000000	EQUALS	$	00,000 00
ADJUSTMENTS / REFUNDS	0,000	KW times	$00 000000	EQUALS		00,000.00
				SUBTOTAL	$	00,000 00
ENERGY	0,000,000	KWh times	$0.000000	EQUALS	$	00,000.00
ADJUSTMENTS / REFUNDS	0,000,000	KWh times	$0.000000	EQUALS		00,000 00
				SUBTOTAL	$	00,000.00
			DEMAND AND ENERGY		$	00,000 00
FUEL ADJUSTMENT CLAUSE	0,000,000	KWh times	$0.000000	EQUALS	$	00,000.00
NON-SMELTER NON-FAC PPA	0,000,000	KWh times	$0.000000	EQUALS		00,000.00
				SUBTOTAL	$	00,000 00
ENVIRONMENTAL SURCHARGE	$00,000.00	Times	0 00%	EQUALS	$	00,000 00
POWER FACTOR PENALTY	0,000	KW times	$00 000000	EQUALS		00,000 00
UNWIND SURCREDIT	0,000,000	KWh times	$0.000000	EQUALS		00,000 00

[T]

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)

RATES, TERMS AND CONDITIONS – SECTION 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

BERRY-EX. 3

Big Rivers ELECTRIC CORPORATION

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

September 10, 2019

Mr. Martin Littrel
President and CEO
Meade County Rural Electric Cooperative Corporation
1351 Irvington Road
Brandenburg, Kentucky 40108

Re: Nucor Corporation Retail Electric Service Agreement

Dear Marty:

This letter agreement ("Letter Agreement") will evidence Big Rivers Electric Corporation's ("Big Rivers") concurrence with the terms of Meade County Rural Electric Cooperative Corporation's ("Meade County RECC") electric service agreement with Nucor Corporation (the "Retail Customer") dated September 9, 2019, a copy of which is attached hereto as Exhibit 1 (the "Retail Agreement"), and the agreement between Big Rivers and Meade County RECC with respect thereto.

(1) **Existing Agreement and Tariffs.** The terms and conditions of the June 11, 1962, wholesale power agreement between Big Rivers and Meade County RECC, as amended, and Big Rivers' filed tariffs shall continue in full force and effect except as expressly modified by this Letter Agreement.

(2) **Additional Rights and Obligations of Big Rivers.** Big Rivers shall make available to Meade County RECC the electric power required during the term of the Retail Agreement to perform the power supply obligations assumed by Meade County RECC in the Retail Agreement, and Big Rivers shall have the benefit of Retail Customer's obligations in such agreement. Big Rivers will supply the facilities required to deliver power to the delivery point, as defined in the Retail Agreement, and to meter electrical usage by Retail Customer.

(3) **Obligations of Meade County RECC.** Meade County RECC shall take and pay for electric power and energy delivered by Big Rivers in accordance with the Retail Agreement, with demand and energy being measured in accordance with the Retail Agreement.

(4) **Obligation of Meade County RECC for Minimum Billing Demand and Termination Charges.** Meade County RECC agrees to bill Retail Customer for any minimum billing demand charges in excess of measured demand, any termination charges, and any other amounts due under the Retail Agreement, and agrees to pay over to Big Rivers all funds actually collected under such billings.

(5) **Division of Any Partial Payments.** Meade County RECC will pay to Big Rivers a pro rata share of any partial payment made to Meade County RECC by or on behalf of Retail Customer.

(6) **Hold Harmless.** Big Rivers acknowledges that Meade County RECC is not charging any retail adder with respect to the Retail Agreement; Big Rivers agrees that Meade County RECC shall not owe Big Rivers any amounts relating to the Retail Agreement except those collected from Retail Customer; and Big Rivers agrees to hold Meade County RECC harmless for any costs Meade County RECC incurs relating to the Retail Agreement.

(7) **Effective Date.** This Letter Agreement will become effective upon approval or acceptance by the Public Service Commission of Kentucky, and upon receipt of any consents or approvals required under Big Rivers' agreements with its creditors, including the Rural Utilities Service.

(8) **Entire Agreement and Amendment.** This Letter Agreement represents the entire agreement of the parties on the subject matter herein, and cannot be amended except in writing, duly authorized and signed by Big Rivers and Meade County RECC. The Retail Agreement cannot be amended without the written approval of Big Rivers. Big Rivers shall have the right to approve the terms and issuer(s) of the letter(s) of credit contemplated by the Retail Agreement to secure the obligations of the Retail Customer.

If this Letter Agreement is acceptable to Meade County RECC, please indicate that acceptance by signing in the space provided and returning four signed counterparts to us.

Sincerely yours,

BIG RIVERS ELECTRIC CORPORATION

Robert W. Berry

Robert W. Berry
President and CEO

ACCEPTED:

MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION

Martin Littrel

Martin Littrel
President and CEO

Date: September 18, 2019

BERRY-EX. 4

The Estimated Local, Regional, and Statewide Economic and Fiscal Impacts of the Nucor Steel Brandenburg Plate Mill, Meade County, Kentucky

by
Barry J. Kornstein
Consulting Economic Researcher

October 3, 2019

EXECUTIVE SUMMARY

In March of 2019, Nucor Corporation announced the company's plans to build a $1.35 billion steel plate manufacturing mill in Meade County, which is located along the Ohio River just southwest of Louisville, Kentucky. The facility will be located in an industrial park along the Ohio River in Brandenburg. It will have a production capacity of 1.2 million tons per year, serving customers throughout the region and nationwide. Full-time positions at Nucor Steel Brandenburg will pay an average annual wage of $72,000 and will include equipment operators, production specialists, safety and environmental technicians, engineers, and office support staff. The purpose of this report is to document and communicate the regional and statewide economic and fiscal importance of the Nucor Steel Brandenburg plate mill to Meade County, the surrounding region, and the Commonwealth of Kentucky.

The analysis in this report is based on data provided by Nucor Corporation describing its spending on various production inputs and the expected volume and value of production output when the mill is fully operational. The $1.35 billion cost of the mill is made up of $200 million in construction costs, including land, land improvements, and buildings, and $1.15 billion for capital equipment, including installation and ancillary costs. The Nucor Steel Brandenburg plate mill is expected to employ 400 people, with gross compensation of $37.4 million (wages plus benefits). The value of Nucor Steel Brandenburg's output of plate steel is expected to be about $900 million in annual sales. I supplement this information where needed with data from the U.S. Census Bureau and Bureau of Economic Analysis as well as IMPLAN, a detailed input-output model that is itself largely based on detailed U.S. government national and regional economic statistics.

Nucor Corporation provided information on the county of residence for their Gallatin steel mill. Based upon this information and data on commuting patterns in and out of Meade County from the U.S. Census Bureau's Longitudinal Employer-Household Dynamics program, I expect that the Brandenburg mill will operate in a well-integrated six-county region encompassing Breckinridge, Bullitt, Hardin, Jefferson, and Meade counties in Kentucky and Harrison County in Indiana. I anticipate that 85 percent of the

Nucor Steel Brandenburg employees will reside in those six counties, 75 percent of them from the five Kentucky counties. An estimated 32 percent of employees are expected to reside in Meade County, with additional impact throughout the region. For this report, I focus on the five Kentucky counties in the region. And since much of the Nucor Steel Brandenburg plate mill's spending with Kentucky vendors will likely occur beyond the five-county region, the mill will also have a significant impact on the rest of Kentucky. I therefore analyze the effect of this expansion on the economy of Meade County, the other four counties in the region, and the entirety of Kentucky.

Nucor Corporation estimates that the Brandenburg mill will require inputs for consumables & supplies, electricity, mechanical vendors, slag operation & processing, natural gas, refractory, scrap (including scrap handling), and freight (rail/truck/barge). While Nucor Corporation has a long track record of spending in the local communities and in the states where it is located to source as much as possible in the regions of its facilities, it does note that some inputs (scrap substitute, electrodes, certain refractory and alloys, along with certain equipment) are not currently available from Kentucky vendors. Without detailed vendor location data, I rely heavily on the input-output model, which has a detailed county-by-county commodity trade model, to assess the availability of steel mill inputs in Meade County, the five-county region, and the state for purposes of this report.

Based on this, it is my opinion to a reasonable degree of economic certainty that the proposed steel mill's total net annual economic impact in Kentucky would be approximately 3,040 jobs and $189 million in labor income (which includes wages and proprietor income plus benefits). Impacted businesses would have annual output (sales) totaling $1.36 billion and annual value added of $360 million (including the Brandenburg mill itself). When discussing economic development, value added is a more relevant measure than output, which is just a summation of all sales. Value added includes just the portion of the value of a firm's sales that is due to the work performed by the firm, stripping out the cost of intermediate goods and services. It eliminates the double counting that occurs with output when supplier firms are included with their customers among impacted businesses. For this reason, state GDP is the sum of all the value added at each of a state's businesses rather than their sales. In other words, GDP represents the total value of all the economic activity in a given geography, a direct indication of the health and growth of the economy.

Of the statewide impact, about 2,800 jobs and $176 million in labor income would be concentrated in the five-county region including Meade County. Impacted businesses in the region would have annual output (sales) totaling $1.3 billion and annual value added of $336 million. Meade County itself would see an increase of 780 jobs, $56 million in labor income, $978 million in output, and $133 million in value added (including the steel mill). Further, it is my opinion to a reasonable degree of economic certainty that, due to the operations of the Nucor Steel Brandenburg plate mill and the household income associated with the additional jobs, state and local governments in Kentucky would receive about $14.3 million more in payroll associated tax revenues (income, sales, and occupational taxes) annually than under current conditions.

The construction and equipping of the facilities will also have a short-term impact on the regional economy, boosting jobs and revenues for a two-year period. The results here are more speculative, since the exact number of contractors that will work on the project, where they reside, how much they will be paid, and which vendors will be supplying the capital equipment are unknown. However, using reasonable assumptions concerning the number of workers and their pay, I estimate that Kentucky could see a two-year boost of around 1,505 jobs with almost $98 million in annual labor income just from the construction of the new mill facilities, with about 98 percent of that impact occurring in the five-county region. Equipping the new mill with machinery, computers, vehicles, furniture, and fixtures would, at a bare minimum, result in a short-term increase of about 840 jobs with $53 million in labor income in the region. While less than 10 percent of that impact would be within Meade County, about 98 percent would be in the five-county region. Nearly all of that impact would be the result of activity in wholesaling and truck transportation rather than the purchase of capital goods. It is possible that the investment impact across the state may be much higher depending on the locations of the eventual vendors.

The above estimates are for the economic and fiscal categories most easily quantified. Although difficult to quantify, it is also my opinion that there are other, positive economic impacts related to the expansion of the mill. For example, the area real estate market is linked to the payrolls at such facilities, but it is very difficult to sort out all the factors that contribute to housing values and commercial properties. Real estate markets are impacted over decades by complex interactions among many factors, including retirements, migration, mortgages, second incomes, second careers, children, as well as any industrial changes in the marketplace. Social indicators, like unemployment and crime, are also likely related to the Nucor Steel Brandenburg plate mill's employment levels, as are public costs for unemployment benefits, retraining, and social services. And the finances of local school districts are linked to the Nucor Steel Brandenburg plate mill's operations. Nucor Steel Brandenburg pays property taxes annually, and employees pay property taxes on their homes as well. In addition, Nucor will pay a school tax of up to 3% on its electricity purchases.

In the remainder of the report, I describe the methods used in this study, and provide the detailed economic and fiscal estimates.

METHODOLOGY

Because the steel produced by the Nucor Steel Brandenburg plate mill will be sold in national and international markets, it will bring new dollars into the regional and state economy – as opposed to simply absorbing local dollars, as is the case for most retail, commercial and service operations. In this sense, the operation of the Nucor Steel Brandenburg plate mill has large and predictable economic and fiscal impacts in Kentucky. The positive benefits associated with industrial manufacturers that export nationally and internationally explain why multiple states including Kentucky aggressively pursued the Nucor plant with economic development incentives.

I now turn to a discussion of the methods used to measure the regional economic and fiscal impacts. First, I explain how I defined the regional economic footprint for purposes of this impact study. Then, I discuss in some detail the input-output model used to measure the statewide impacts.

Location and Economic Footprint

The Nucor Steel Brandenburg plate mill will be located in Meade County, Kentucky. Because Nucor Steel Brandenburg will be a large employer requiring skilled workers in a sparsely populated county, it must pull from a fairly wide commuting shed. In many ways, the Nucor Gallatin Steel plant is similarly situated. County of residence data for that plant show that only 11 percent of employees live in Gallatin County, but that 54 percent live in the six contiguous bordering counties. U.S. Census Bureau data from the Longitudinal Employer-Household Dynamics program for manufacturing employers show a more concentrated commuter shed than Gallatin's, but still just 40 percent residing in Meade County. Based off of both the Gallatin mill information and the Meade County commuting data, the table below presents a probable commuting pattern for the Nucor Steel Brandenburg plate mill. I estimate that about one-third of employees will reside in Meade County and another two-fifths in the surrounding four counties. The compensation numbers in the table are based on an average salary of $72,000, with benefits roughly equal to 30 percent of wages.

Probable Commuting Pattern for Nucor Brandenburg Plant		
County of Residence	**Employees**	**Compensation**
Meade	130	$12,168,000
Breckinridge	50	$4,680,000
Bullitt	15	$1,404,000
Hardin	55	$5,148,000
Jefferson	50	$4,680,000
Other Kentucky	25	$2,340,000
Indiana	75	$7,020,000
Total	400	$37,440,000

Note: Estimated from US Census Bureau Longitudinal Employer-Household Dynamics commuting data and employee residence information provided for Nucor's Gallatin Steel Plant.

It is therefore very likely that much of the spin-off activity resulting from the household spending of Nucor Steel Brandenburg employees does not impact Meade County, but that most of it is captured within the five-county region. Additionally, while the dollar values of the business-to-business spending by Nucor Steel Brandenburg will be high enough to generate significant spin-off activity in Meade County and the surrounding counties, since many of the goods and services purchased in Kentucky will likely go to businesses in other parts of the Commonwealth, Nucor Steel Brandenburg will have a siginificant impact beyond the five-county region. Therefore, I utilize economic models of Meade County, the four surrounding counties, the remaining 115 Kentucky counties, and one of the Commonwealth of Kentucky to derive the overall impacts.

Input-Output Model of Kentucky

To evaluate the economic and fiscal impacts of the Nucor Steel Brandenburg plate mill, I used standard regional economic impact methods. I obtained detailed economic data for each of the five counties and the Commonwealth of Kentucky and used them to build IMPLAN input-output models of the region.[1] The model can simulate the effects of changes in economic activity for any of 536 regional industries. It also can predict detailed inter-industry purchases and household spending related to industrial changes. Such region-specific models have the advantage that they take into account those industrial supplies and retail items likely available in the region and thus provide more precise

1 As best I can tell, IMPLAN is one of the most widely used regional input-output modeling systems in the world. It has been used for thousands of impact studies. It was developed by economists at the University of Minnesota, and is sold by IMPLAN, Inc. See implan.com for documentation.

economic impact estimates than one that assumes everything is available in the region. The more that local industries can support the plant operation and the employees' household demands, the greater the regional economic multipliers, and hence the greater the predicted regional economic impact.

The Nucor Steel Brandenburg plate mill fits the North American Industrial Classification System (NAICS) code 331110, Iron and Steel Mills and Ferroalloy Manufacturing. The official definition is as follows:

> *(331110) This industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) making steel; (5) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); (6) making steel and forming pipe and tube; and (7) manufacturing electrometallurgical ferroalloys. Ferroalloys add critical elements, such as silicon and manganese for carbon steel and chromium, vanadium, tungsten, titanium, and molybdenum for low- and high-alloy metals. Ferroalloys include iron-rich alloys and more pure forms of elements added during the steel manufacturing process that alter or improve the characteristics of the metal being made.*

https://www.census.gov/eos/www/naics/index.html

At the heart of regional input-output models are industrial production functions, which are recipes for producing the products of an industry, what is needed, and relatively how much is spent on each input. These are combined with estimates of how much of the supply needs of an industry can be provided by other regional industries. The models use federal data on the presence of industries in the local economy to predict how much of an industry's inputs can be supplied locally versus that which must be imported from other regional economies. The IMPLAN models for Meade County and the five-county region needed to be customized to include the future Nucor Steel Brandenburg plate mill while making sure that the supplier linkages involving current businesses were not compromised.

Rather than just specifying the number of jobs in Meade County due to the expansion and the anticipated increase in sales and running a multi-region analysis in IMPLAN (which models the interactions among businesses and households in different regions, in this case the five counties and the rest of Kentucky), the analysis was divided into parts for two reasons. First, the commuting pattern associated with the plant is different from the default in IMPLAN. Second, steel mills require some very expensive inputs that are purchased in bulk from specific suppliers located in specific places. Getting the geographic locations and high dollar values together correctly matters. For these reasons, I modeled the household spending of the new employees in the counties they are expected to reside in. I also modeled the unique industry spending pattern of the steel industry for different levels of geography (county, regional, rest of state) because their availability varies by location. In this way, the results below represent a fairly accurate representation of the possible impacts of the new steel mill operations.

ECONOMIC IMPACTS

Based on that method, the IMPLAN model uses annual economic data to provide reasonable estimates of statewide effects on sales, jobs, and payrolls for export-based expansions or contractions of any of 536 industries in Kentucky. In the table below, I summarize the results of the IMPLAN simulations I ran on the five customized county models and the regional model containing the remaining 115 Kentucky counties. The table is divided into sections covering the estimated impacts within Meade County, the group of four surrounding Kentucky counties, the rest of Kentucky, and the Kentucky statewide totals. Meade County, where the direct impact (the new plant) occurs, is listed first. The impacts in the other regions can be considered the spin-off activity to the rest of the state resulting from the plant. A discussion of the relevant economic terms follows the table.

Estimated Local, Regional, and Statewide Impact of Nucor Brandenburg Plant

Impact Type	Employment	Labor Income	Value Added (GDP)	Output
		Meade County		
Direct Effect	400	$37,440,000	$99,350,231	$900,000,000
Indirect Effect	309	$16,830,708	$28,421,845	$68,428,446
Induced Effect	71	$2,019,127	$5,367,582	$9,723,559
Total Effect	**780**	**$56,289,835**	**$133,139,658**	**$978,152,005**
Primary Kentucky Commuting Shed (Breckinridge, Bullitt, Hardin, & Jefferson Counties)				
Indirect Effect	1313	$85,747,495	$144,679,658	$235,658,481
Induced Effect	720	$34,040,378	$58,426,500	$99,010,685
Total Effect	**2033**	**$119,787,873**	**$203,106,158**	**$334,669,166**
		Rest of Kentucky		
Indirect Effect	145	$10,173,289	$18,056,907	$44,023,739
Induced Effect	86	$3,226,584	$5,694,616	$10,824,269
Total Effect	**230**	**$13,399,873**	**$23,751,523**	**$54,848,008**
		Statewide Totals		
Direct Effect	400	$37,440,000	$99,350,231	$900,000,000
Indirect Effect	1767	$112,751,492	$191,158,410	$348,110,666
Induced Effect	877	$39,286,089	$69,488,698	$119,558,513
Total Effect	**3044**	**$189,477,581**	**$359,997,339**	**$1,367,669,179**
Implied Multiplier	7.61	5.06	3.62	1.52

Source: IMPLAN version 3.1 input-output models of Meade, Breckinridge, Bullitt, Hardin, and Jefferson counties and a region consisting of the remaining 115 Kentucky counties. 2016 IMPLAN economic data. Values in 2022 dollars. Results presented are sums of all household and industry spending analyses.

For each of several impact types (Employment, Labor Income, Value Added and Output), the IMPLAN model begins with a direct effect – here, a new steel plant. The direct effect would be the 400 new employees earning $37.4 million in compensation producing $900 million worth of steel plates. Labor income includes fringe benefits (both privately provided, such as health insurance or retirement fund matches, and government provided, such as Social Security and Medicare payments) as well as proprietor income (e.g. self-employment and unincorporated small businesses). Value added refers to the value of the product that is not tied to the prices of the purchased inputs. It is the difference between the sales value of the steel products and the value of all the purchased inputs, so it is the additional value gained during the production process. Since an input of one industry is the output of an industry upstream in the production process, focusing on value added avoids double counting. State level GDP, for example, is just the sum of the value added at all businesses in the state (not the sum of their output/sales). Given a Direct Effect, the IMPLAN model calculates an Indirect Effect, Induced Effect, Total Effect, and an economic Multiplier.

The Indirect Effect in the table refers to the linkages between the exporting industry (steel) and its industrial vendors (raw materials, transportation, electricity, tools, computers, insurance, etc.). When the exporting industry expands or contracts, it raises or lowers its purchases from its vendors, thus changing their employment and payrolls. Of course, the vendors also purchase goods and services from each other, so that the total indirect effect includes all the inter-industry linkages.

The Induced Effect refers to the impact of the new sales in the exporting industry (steel) on the local economy through the rounds of re-spending of the additional household income caused by the operation of the plant. Regional sales of cars, groceries, building supplies, banking services, and so on are all sensitive to growth in disposable income, as are donations to nonprofit groups, churches, and charities. The induced effect includes the household spending of all households affected directly and by the indirect linkages (the employees benefiting from the indirect effects). The Total Effect is the sum of the Direct, Indirect and Induced Effects.

The table clearly shows that the opening of the Nucor Steel Brandenburg plate mill would have considerable impact both locally, regionally, and statewide. Within Meade County, I estimate that about 780 total jobs would be supported by the plant (including the new jobs at the plant). Those jobs infuse the local economy with an additional $56 million in labor income. Those figures represent roughly 10 and 18 percent of current jobs and labor income in Meade County, so the impacts are considerable. Those jobs would be associated with approximately $133 million in value added, about 22% of current value added in Meade County. Roughly 310 jobs and $16.8 million of income would be due to business-to-business spending, both between Nucor Steel Brandenburg and its suppliers within Meade County and between those suppliers themselves. An additional 70 jobs and $2 million of income would be due to the household spending of Nucor Steel Brandenburg employees and those households affected by the added business-to-business spending within the county (induced effects tend to result in lower average income per job because much of the employment is in lower paying retail and personal service industries).

Beyond Meade County, the expansion would have large effects in the wider commuting region, with just over 2,000 jobs and nearly $120 million in labor income in spread among Breckinridge, Bullitt, Hardin, and Jefferson counties. This results from both the spending done by Nucor Steel Brandenburg in those counties (indirect effect), and the household spending of its new employees who live in other counties and the spending of households benefiting from Nucor Steel Brandenburg's use of local vendors (induced effect). Beyond the five-county region, Nucor Steel Brandenburg's reach is wide enough that the expansion would support 230 jobs throughout the rest of Kentucky, with labor income totaling $13 million.

In sum, the Nucor Steel Brandenburg plate mill would likely benefit the state of Kentucky by supporting an additional 2,640 jobs in additional to the 400 jobs at the plant itself. Those jobs would add about $189 million in labor income to state households. With the affected businesses adding around $260 million to the state GDP. Including the plant, the expansion would support about $360 million of Kentucky's GDP.

A few things about the multiplier line in the table are worth mentioning. The IMPLAN Multipliers allow a reasonable prediction of the total statewide economic impact of a change such as the Direct Effect. For example, looking at the Employment column of the table, the estimated job multiplier for the Nucor Steel Brandenburg plate mill in Kentucky is 7.61, meaning that for every job at Nucor Steel Brandenburg, another 6.61 jobs are created elsewhere in Kentucky. Similarly, the multiplier for Labor Income for Kentucky in the table is 5.06, meaning that for every dollar of income created at Nucor Steel Brandenburg another $4.06 in income is created in other Kentucky industries. The Output Multiplier for Kentucky, 1.52 as shown in the table, measures the total statewide revenues of companies divided by the direct Nucor Steel Brandenburg revenues of $900 million, as calculated. The Output Multiplier of 1.52 means that companies in Kentucky see an additional $0.52 in sales when Nucor Steel Brandenburg sales rise by one dollar. Finally, the Value Added Multiplier estimates the sales dollars that 'stick' to Kentucky. Value added refers to the portion of total sales that is accounted for by regional companies and which stimulate the regional economy.[2] The Value Added Multiplier of 3.62 means that companies in Kentucky add $2.62 in value to the Kentucky economy for every $1 added by the Nucor Steel Brandenburg plate mill. The distinction between Output and Value Added is important in regional economic studies since much of what goes into the total value of a product is intermediate goods and services purchased from vendors outside the region, and thus local economic activity can affect many regions.

The employment multiplier is so large because a large volume of steel can be produced with relatively few employees (compared to other industries) and about 80 percent of its value is in the inputs. Per employee, a steel plant is purchasing a very high value of intermediate goods and services. So, there are a lot of jobs created in industries where the value of the goods and services per employee is much less than it is for steel. This results in a high employment multiplier and much lower output multiplier. The income multiplier is significantly lower than the job multiplier because steel plant jobs pay much better than most of the jobs benefiting from their impact.

Taxes and Fiscal Impacts

To reasonably estimate the fiscal impacts of an industrial expansion or contraction in a region, analysts must rely on company records and local sources of data. I turn now to a discussion of the types of taxes and how I link fiscal impacts to economic impacts. I focus on the tax revenues that are most directly related to the payroll impacts of new jobs. These estimated tax revenues are related both to the direct Nucor Steel Brandenburg wages and salaries and to the indirect and induced labor income statewide, as predicted by my IMPLAN models. I estimate that the total annual fiscal impact in Kentucky will be $14.3 million, as discussed below.

Because I used five county models and a model for the rest of the state, I can estimate the employee sales and income tax revenues linked to the Nucor Steel Brandenburg plate mill at both the state and local levels. Employees pay state sales taxes when they spend their wages in the local economy and are also liable for state income and local occupational taxes in Kentucky.

2 For an insightful example of value added, consider the purchase of a new car at a Lexington area dealership. If a resident spent $25,000 on a new Subaru Outback, most of the dollars would flow immediately to the manufacturer of the car, built in Indiana with top management in Japan. Only a few thousand dollars in dealer prep work and commissions would be captured in the Lexington economy. So, in economic parlance, the value of output (sales) would be $25,000, and value added might be only $3,000.

Kentucky State Sales and Income Tax

By comparing the ratio of tax receipts to regional labor income, I calculate "effective" tax rates and use those to estimate the amount of Kentucky employees' income and sales taxes linked to the Nucor Steel Brandenburg payroll and impacts throughout the state. Labor income data by county comes from the US Bureau of Economic Analysis while the tax receipt data is compiled from multiple tax annual reports released by the Kentucky Revenue Cabinet. I used a ten-year average effective rate over the period 2008-17 (the last ten years for which all data is complete). The income tax effective rate for these employees is 3.4% and the sales tax effective rate is 2.83%.

Calculated this way, I estimate that state government revenues attributable to the Nucor Steel Brandenburg plate mill employees will be $6.4 million in income taxes and $5.4 million in sales taxes.

Local Occupational Taxes

Note that employees of the Nucor Steel Brandenburg plate mill not only pay state income and sales taxes, they also often pay local occupational taxes. The annual impact of these payments can be reasonably estimated, too, and are significant.

I have taken the local government jurisdictions that levy occupational taxes in counties and cities and weighted their rates by the value of wage in each jurisdiction in that county. This gives us a weighted average local occupational tax for each county to apply to the payroll impact of the IMPLAN model. I have also created weighted averages of occupational taxes for the five-county region and for the state using payroll inside and outside taxing jurisdictions as the weight. I apply these weighted averages to the combined indirect and induced payroll impacts. I applied the same methods for school district occupational taxes.

Applying the appropriate payroll impact to the weighted local tax rates, I estimate that local school districts would receive about $500,000 in occupational taxes, and local city or county governments would receive $2 million in occupational tax revenue due to the effects of the Nucor Steel Brandenburg plate mill.

Constructing and equipping the plant would also bring short-term impacts lasting a couple of years (those impacts are discussed below). Local jurisdictions could see a boost of $375,000 in occupational taxes for a couple years.

Although harder to measure, additional tax impacts are also likely. Unemployment insurance taxes, insurance premiums taxes, building permit fees, motor vehicle sales taxes, and many other business tax categories are all affected by the operations of the plant. Employees also pay gasoline taxes and property taxes, and there are positive effects on the regional real estate market.

CONSTRUCTION IMPACTS

There are short-term impacts arising from the construction and equipping of the new facilities as well. The project is budgeted for $200 million in direct construction spending, including land, land improvements, and buildings, and $1.15 billion for capital equipment, including installation and ancillary costs. I modeled the construction and capital equipment purchases separately, with the results presented in the following tables.

The construction schedule is currently two years. Nucor Steel Brandenburg anticipates about 2000 contractors will work on the site at some point during the construction period, though contractors will come and go depending on the need. It is expected that it will take about four million man-hours to construct and equip the plant over two years. Assuming a typical 40-hour work week, this works out to an average of about 960 contractors on-site on any given day. Assuming an average annual wage of $60,000 and benefits typical of the sector, the expansion construction will add about $68.5 million in labor income to the region each year for the two years of construction. This level of activity can be expected to support an additional $29.5 million in sales (output) in Meade County, helping to employ a further 215 people in jobs with $6.6 million of labor income (wages plus benefits). Altogether, the two-year construction phase can be expected to temporarily boost employment in the county by 1,175 jobs and increase incomes by $80 million. The table also shows the construction impact will have significant impact in the other four counties in the region, and even some impact in the rest of the state.

Estimated Local, Regional, and Statewide Impact of Nucor Brandenburg Plant Construction (Annual Impact for Two Years)

Impact Type	Employment	Labor Income	Value Added (GDP)	Output
		Meade County		
Direct Effect	962	$73,636,402	$85,835,477	$100,000,000
Indirect Effect	37	$1,627,896	$2,639,569	$5,870,076
Induced Effect	177	$5,012,400	$13,126,417	$23,883,022
Total Effect	**1176**	**$80,276,698**	**$101,601,463**	**$129,753,098**
Primary Kentucky Commuting Shed (Breckinridge, Bullitt, Hardin, & Jefferson Counties)				
Indirect Effect	58	$4,345,202	$7,587,465	$11,780,344
Induced Effect	251	$14,428,080	$21,287,366	$34,715,058
Total Effect	**309**	**$16,313,793**	**$27,351,358**	**$46,495,402**
		Rest of Kentucky		
Indirect Effect	12	$684,899	$1,023,121	$2,682,153
Induced Effect	11	$442,363	$716,139	$1,555,315
Total Effect	**23**	**$1,127,261**	**$1,739,260**	**$4,237,468**
		Statewide Totals		
Direct Effect	962	$73,636,402	$85,835,477	$100,000,000
Indirect Effect	107	$6,657,997	$11,250,155	$20,332,573
Induced Effect	438	$19,882,843	$35,129,922	$60,153,395
Total Effect	**1507**	**$97,717,752**	**$130,692,081**	**$180,485,968**
Implied Multiplier	1.57	1.33	1.52	1.80

Source: IMPLAN version 3.1 input-output models of Meade, Breckinridge, Bullitt, Hardin, and Jefferson counties and a region consisting of the remaining 115 Kentucky counties. 2016 IMPLAN economic data. Values in 2022 dollars. Results presented are sums of all household and industry spending analyses.

I modeled the $1.15 billion in capital equipment spending using IMPLAN's equipment, furniture, and fixtures investment spending profile for the primary metal industries. I centered the spending in Meade County and conducted a multi-region analysis with the other five counties in the region and the model for the rest of the state. I also modeled the wider five-county region since Jefferson and Hardin counties are possible sources for some of this spending. The results reflect that just $7.5 million of the $1.15 billion in spending needed to equip the steel plant will occur in Meade County. The larger five-county region is expected to account for about $76 million of the $1.15 billion. A detailed examination of the results (not shown) reveals that nearly all of that regional spending goes towards wholesale trade and truck transportation, the middlemen rather than the equipment itself. The indirect and induced impacts in the table are the result of that limited activity.

Estimated Local, Regional, and Statewide Impact of Nucor Brandenburg Plant Capital Equipment Investment (Annual Impact for Two Years)

Impact Type	Employment	Labor Income	Value Added (GDP)	Output
		Meade County		
Direct Effect	49	$2,225,683	$3,721,816	$7,466,109
Indirect Effect	11	$316,535	$522,248	$1,213,308
Induced Effect	6	$170,335	$447,297	$812,834
Total Effect	**66**	**$2,712,552**	**$4,691,360**	**$9,492,251**
Primary Kentucky Commuting Shed (Breckinridge, Bullitt, Hardin, & Jefferson Counties)				
Direct Effect	328	$27,783,700	$43,657,088	$76,120,597
Indirect Effect	204	$11,718,409	$17,894,479	$29,458,553
Induced Effect	228	$10,479,002	$18,406,311	$31,287,694
Total Effect	**760**	**$49,981,111**	**$79,957,878**	**$136,866,843**
		Rest of Kentucky		
Indirect Effect	9	$468,946	$662,200	$1,704,541
Induced Effect	7	$261,807	$427,565	$916,129
Total Effect	**15**	**$730,753**	**$1,089,765**	**$2,620,671**
		Statewide Totals		
Direct Effect	377	$30,009,382	$47,378,904	$83,586,706
Indirect Effect	224	$12,503,890	$19,078,927	$32,376,402
Induced Effect	241	$10,911,143	$19,281,172	$33,016,657
Total Effect	**842**	**$53,424,415**	**$85,739,002**	**$148,979,764**
Implied Multiplier	2.23	1.78	1.81	1.78

Source: IMPLAN version 3.1 input-output models of Meade, Breckinridge, Bullitt, Hardin, and Jefferson counties and a region consisting of the remaining 115 Kentucky counties. 2016 IMPLAN economic data. Values in 2022 dollars. Results presented are sums of all household and industry spending analyses.

Since the list of vendors for the capital equipment has not yet been decided upon, this modeling reflects the absolute lowest economic impact to Kentucky. If Nucor Steel Brandenburg were to choose equipment and machinery vendors located within Kentucky, then the resulting impacts would have to be modeled separately and would likely reflect greater positive impacts to Kentucky.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF BIG RIVERS ELECTRIC CORPORATION AND MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION FOR APPROVAL OF CONTRACTS FOR ELECTRIC SERVICE WITH NUCOR CORPORATION.	)	Case No. 2019-00365
AND	)	
APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL OF TARIFF.	)	

DIRECT TESTIMONY

OF

PAUL G. SMITH
CHIEF FINANCIAL OFFICER

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

Filed: October 18, 2019

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 related to the launch of 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, financial forecasting, 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, I testified in Case No. 2019-00269 regarding Big Rivers' contracts with the City of Henderson, Kentucky and City of Henderson Utility Commission d/b/a Henderson Municipal Power & Light. I also testified on behalf of Duke Energy Kentucky, Inc. on several occasions, including Case No. 2006-00172, in which Duke sought an increase in rates, and Case No. 2008-0495, in which Duke sought approval of energy efficiency programs and an energy efficiency rider.

II. PURPOSE OF TESTIMONY

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

A. The purpose of my testimony is to describe the modified Large Industrial Customer Expansion ("LICX") tariff that Big Rivers requests to reinstate in concert with the special contracts proposed in this matter. The proposed LICX tariff is included as Attachment E of Berry-Ex. 2 (the Retail Agreement).

Q. Are you sponsoring any Exhibits?

A. Yes. I have prepared the following exhibits to my prepared testimony:

- Smith-Ex. 1 – Professional Summary

III. OVERVIEW OF LICX TARIFF PROPOSAL

Q. Please briefly explain the history of the LICX tariff.

A. The Commission established the initial LICX tariff (referred to at the time as "Rate Schedule 10") on February 25, 2000 in Case No. 99-360 in order to address Big Rivers' concern that the unexpectedly robust native load growth forecasted on its system would eventually exceed its available capacity. At that time, having recently gone through bankruptcy, Big Rivers feared that it did not have the financial wherewithal to absorb the volatile wholesale market prices of power needed to serve the forecasted load additions. To prevent potential financial harm resulting from Big Rivers' projected capacity shortfall, the Commission approved the LICX tariff, which provided an option for certain load to pay market-based rates for power, plus a per kW-month adder.

While the initial LICX tariff was approved only as a three-year pilot program, the Commission continually extended the tariff's life.[1] But in 2014, circumstances changed significantly on the Big Rivers system with the loss of the smelter load. Considering the substantial reduction in native load associated with the smelter loss, Big Rivers no longer saw a need for the LICX tariff. Consequently, Big Rivers requested that the Commission terminate the tariff. The Commission approved that request on April 25, 2014 in Case No. 2013-00199.

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[1] Case No. 2002-00272, Order (October 1, 2002); Case No. 2005-00275, Order (August 11, 2005), Case No. 2007-00164, Order (February 1, 2008).

Q. How does the rate structure of the LICX tariff proposed in this case compare to previous versions of the tariff?

A. The initial version of the LICX tariff applied to new or expanded loads equal to five (5) MWs or greater. That load size requirement was later increased to ten (10) MWs or greater. However, under the modified version of the LICX tariff, new or expanded loads of large industrial or commercial customers would have to equal fifty (50) MWs or greater in order to qualify for the tariff.

Similar to the previous versions of the LICX tariff, qualifying load would be supplied at the actual market prices of power purchased by Big Rivers from third-party suppliers. Under the modified LICX tariff, this would include all capacity and energy charges, charges to compensate for transmission losses on third-party transmission systems, all transmission and ancillary services charges on third-party transmission systems paid by Big Rivers to purchase the power and have it delivered to Big Rivers' transmission system, and all Midcontinent Independent System Operator expenses and costs.

Like the previous LICX tariff, eligible customers would be subject to an adder for all of the power purchased under the tariff. But unlike previous versions of the LICX tariff, where the level of the adder was expressly set forth in the tariff, the modified version of the LICX tariff would allow the level of that adder to vary by customer on a case-by-case basis. This would allow Big Rivers leeway to propose a reasonable markup level associated with its market purchases based upon the individual circumstances surrounding the new or expanded load.

Q. Why reestablish the LICX tariff now?

A. Reinstatement of a modified LICX tariff will facilitate Nucor's $1.35 billion expansion into Kentucky. The LICX tariff [redacted] Like the previous LICX tariff, this structure would allow Big Rivers to receive some compensation if load growth exceeds its available capacity.

Moreover, reestablishment of a modified LICX tariff may help facilitate additional economic development in Kentucky. Several other companies have recently expressed interest in expanding in Big Rivers' service territory. If these discussions come to fruition, Big Rivers may again experience a potential capacity shortfall and consequently, may need to rely upon the proposed LICX tariff.

Q. Does this conclude your testimony?

A. Yes, it does.

BIG RIVERS ELECTRIC CORPORATION

JOINT APPLICATION OF BIG RIVERS ELECTRIC CORPORATION AND MEADE COUNTY RURAL ELECTRIC COOPERATIVE CORPORATION FOR APPROVAL OF CONTRACTS FOR ELECTRIC SERVICE WITH NUCOR CORPORATION.
AND
APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL OF TARIFF
CASE NO. 2019-00365

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 Smith
____
Paul G. Smith

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Paul G. Smith on this the 17th day of October, 2019.

Katherine Risley
____
Notary Public, Kentucky State at Large

My Commission Expires October 31, 2020

SMITH-EX. 1

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