

FINDING OF NO SIGNIFICANT IMPACT

**Brandenburg Steel Mill Service 345 and 161 kV Transmission Project
Meade County, Kentucky**

**RURAL UTILITIES SERVICE
U.S. Department of Agriculture**

**Big Rivers Electric Corporation
Kentucky 62**

**Prepared by:
Engineering and Environmental Staff
Rural Utilities Service**

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A. INTRODUCTION

Big Rivers Electric Corporation (Big Rivers Electric) has submitted a financing request to the U.S. Department of Agriculture, Rural Utilities Service (RUS) to construct the proposed Brandenburg Steel Mill Service 345 and 161 kV Transmission Project (proposed Project) in Meade County, Kentucky. RUS may consider approving this financing request. Prior to taking a federal action (e.g., providing financial assistance), RUS is required to complete an environmental effects analysis in accordance with the National Environmental Policy Act of 1969 (NEPA) (U.S.C. 4231 et seq.), the Council on Environmental Quality's (CEQ) regulations for implementing NEPA (40 CFR Parts 1500-1508), and RUS's NEPA implementing regulations, Environmental Policies and Procedures (7 CFR Part 1970). RUS is required to prepare an Environmental Assessment (EA) for the proposed Project. After completing an independent analysis of a report prepared by Burns and McDonnell Engineering Company, Inc., RUS concurred with its scope and content. In accordance with 7 CFR § 1970.102(6), RUS adopted the report and issued it as the agency's EA for the proposed Project. RUS finds that the EA is consistent with federal regulations and meets the standards for an adequate EA. The Cooperative published two newspaper notices in a weekly periodical, announcing the availability of the EA for public review, in accordance with 7 CFR §1970.102(6)(ii).

B. PURPOSE/NEED

1. Agency Purpose and Need

RUS is authorized to make loans and loan guarantees to finance the construction of electric distribution, transmission, and generation facilities, including system improvements and replacements required to furnish and improve electric service to rural areas, as well as demand side management, energy conservation programs, and on-grid and off-grid renewable energy systems. The Rural Electrification Act of 1936, as amended (7 USC §901 et seq.), generally authorizes the Secretary of Agriculture to make rural electrification and telecommunication loans, including specifying eligible borrowers, references, purposes, terms and conditions, and security requirements.

2. Applicant Purpose and Need

The proposed Project is needed to support the new Nucor Corporation steel mill near Brandenburg, Meade County Kentucky that will add a 200 MW load to Big Rivers Electric's system. As the all-requirements wholesale supplier for Meade County Rural Electric Cooperative Corporation (Meade County RECC), one of Big Rivers Electric's three distribution cooperative members, Big Rivers Electric is obligated to provide Meade County RECC with transmission service. The proposed Project is needed to enable Big Rivers Electric to fulfill that obligation in light of projected load growth in the Meade County area, including the new steel plate manufacturing mill (Brandenburg Steel Mill or BSM) that Nucor Corporation is building in Meade County and other load growth that is likely as a result of the new Nucor facility.

C. PROJECT DESCRIPTION

The proposed Project involves constructing seven (7) transmission projects in Meade County, Kentucky, to provide service to a 200 MW load in Big Rivers Electric's transmission system. The new service plan would include the following project components:

Substations and Switching Stations: The stations will be enclosed with a fence height of 8 feet and a 7-foot square mesh fabric with one foot of barbed wire. The equipment within the stations will have a maximum height of 95 feet above grade for the steel A-frames. The amount of new land disturbance required for each substation or switching station is provided below.

- RUS #908: Brandenburg Steel Mill 345/34.5 kV Substation: The new substation would be located within the limits of the new Nucor Brandenburg Steel Mill near KY 933 and Buttermilk Falls Rd and will require approximately 7.4 acres of land disturbance. The substation will contain a 345/34.5 kV transformer, 345 kV line terminations, circuit breakers and associated bus work.
- RUS #907: Otter Creek 345/161 kV Substation: The new substation would be located at the intersection of KY 313 and KY 1238 and will be located on an approximately 11.7 acre parcel with an additional 1.7 acres of site storage associated with it. This substation will contain 345 kV and 161 kV line terminations, a 345/161 kV transformer, circuit breakers and associated bus work.
- RUS #1070: Meade County Substation 161 kV Terminal: The existing Meade County Substation, located at the intersection of KY 79 and Highway 428, will require the installation of a new 161 kV transmission line terminal within the fenced area; new land disturbance outside of previously disturbed area is not required.
- RUS #909: Redmon Road EHV Switching Station: The new switching station would be located southeast of KY 313 and US 60 and will require approximately 3.4 acres of land disturbance. The switching station will contain 345 kV line terminations, circuit breakers, bus work and power switches.

Transmission Lines: New 345 kV transmission line structures would be built of braced post tangent design using steel or concrete spun structures spaced approximately 500 feet apart. The right-of-way (ROW) width for each voltage of line would vary as described below.

- RUS #1072: Otter Creek Substation to Brandenburg Steel Mill (BSM) Substation 345 kV Line Addition: Line involves rebuilding 7.4 miles of existing 69 kV line as 345/69 kV double circuit line within an existing 100-foot wide ROW. An additional 1.0 mile of new 345 kV line is needed to connect the existing line to the BSM Substation and the Otter Creek Substation. Approximately 0.2 miles of the new line would be located within Nucor Corporation's steel

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mill property and will have a new 150-foot wide ROW; the remaining 0.8 miles will be located on private easements and require a new 125-foot wide ROW.

- RUS #830: Meade County Substation to Otter Creek Substation 161/69 kV Double Circuit Line Addition: Line involves rebuilding 7.9 miles of existing 69 kV line as 161/69 kV double circuit that will include pole for pole replacement of the entire line within its existing 100-foot ROW. An additional 1.0 miles of new, 125-foot ROW also is needed to route the 161 kV line to the west side of the Meade County Substation and the north side of the Otter Creek Substation.
- RUS #1071: Redmon Road EHV Switching Station to Otter Creek Substation 345 kV Line: Line involves constructing 2.5 miles of new 345 kV line and requires a new 125-foot wide ROW located on private easements.

D. ALTERNATIVES EVALUATED

1. No Action

Under the No Action Alternative, RUS would not provide financial assistance to the Cooperative, and/or the proposed Project would not be built. This alternative would not meet the Cooperative's need to provide reliable transmission service to Meade County RECC in association with the load requirements for Nucor's BSM project.

2. Action Alternative (Preferred Alternative)

Under the Action Alternative, RUS would consider financing the proposed Project, and the Cooperative would construct the proposed Project, which includes rebuilding and installing new transmission 345 and 161 kV lines, two new substations and one switching station in Meade County, Kentucky. Additional Project details can be found in section "**B. Project Description**" of this document.

3. Alternatives Eliminated from Further Consideration

In addition to the No Action Alternative and Action Alternative, the Cooperative considered other alternatives such as service plan options (i.e., transmission system design options to provide service to BSM), alternative routes for transmission lines, and alternative substation and switching station sites. These other alternatives and factors for their elimination are discussed in more detail in **Section 2.0** and **Appendix B** of the EA.

E. SUMMARY OF ENVIRONMENTAL EFFECTS

The analyses in the EA documented that the proposed Project would have no adverse effects to land use and important farmland soils. A summary of anticipated effects on the human environment is provided below.

Cultural Resources and Historic Properties. Big Rivers Electric and Burns & McDonnell (its Consultant) initiated consultation with the Kentucky State Historic Preservation Office (SHPO) by letter dated April 1, 2020. Pursuant to 36 CFR § 800.2(c)(4), and 7 CFR § 1970.5(b)(2) of the regulations, “Environmental Policies and Procedures” (7 CFR Part 1970), RUS has issued a blanket delegation for its applicants and their consultants to initiate and proceed through Section 106 review with tribes on the basis of agreement. Big Rivers Electric and its Consultant coordinated with federally recognized tribes by letter dated December 19, 2019 to the following 59 tribes (note those bolded in the list below responded; the rest did not respond):

- Absentee-Shawnee Tribe of Oklahoma
- Eastern Shawnee Tribe of Oklahoma
- **Shawnee Tribe of Oklahoma**
- **Cherokee Nation of Oklahoma**
- United Keetoowah Band of Indians in Oklahoma
- Eastern Band of Cherokee Indians
- Citizen Potawatomi Nation
- Forest County Potawatomi
- Hannahville Indian Community
- Gun Lake Tribe
- **Nottawaseppi Huron Band of Potawatomi**
- Prairie Band of Potawatomi
- Pokagon Band of Potawatomi
- Kickapoo Traditional Tribe of Texas
- Kickapoo Tribe of Kansas
- Kickapoo Tribe of Oklahoma
- **Miami Tribe of Oklahoma**
- Saginaw Chippewa Indian Tribe of Michigan
- Lac Vieux Desert Band of Lake Superior
- Lac du Flambeau Band of Lake Superior
- Sault Ste Marie Tribe of Chippewa
- Bad River Band of Lake Superior Chippewa
- Keweenaw Bay Indian Community
- Lac Courte Oreilles Band of Chippewa
- Red Cliff Band of Lake Superior Chippewa
- Red Lake Chippewa
- Sokaogon Chippewa
- St. Croix Chippewa Community
- Turtle Mountain Band of Chippewa
- Fon du lac Band of Lake Superior
- Bois Forte Band of Chippewa
- Grand Portage Band of Lake Superior Chippewa
- Leech Lake Band of Ojibwe
- Mille Lacs Band of Ojibwe
- Grand Traverse Band of Ottawa and Chippewa
- Little River Band of Ottawa
- Ottawa Tribe of Oklahoma
- Little Traverse Bay Band of Odawa
- Peoria Tribe of Oklahoma
- Sac and Fox Tribe of Mississippi in Iowa
- Sac and Fox Nation of Missouri in Kansas and Nebraska
- Sac and Fox Nation of Oklahoma
- Cayuga Nation of New York
- Oneida Nation of New York
- Oneida Nation of Wisconsin
- Onondaga Nation of New York
- Seneca Nation of Indians of New York
- Seneca-Cayuga of Oklahoma
- St. Regis Mohawk Tribe
- Tonawanda Seneca Nation
- Tuscarora Nation of New York
- **Chickasaw Nation**
- **Choctaw Nation of Oklahoma**
- **Quapaw**
- Osage Nation of Oklahoma
- Delaware Nation of Oklahoma
- Delaware Tribe of Indians Oklahoma
- Wyandotte Nation of Oklahoma
- Muscogee Creek Nation

Of the seven tribes that responded, the Cherokee Nation and the Shawnee Tribe of Oklahoma requested further coordination. When consulting under RUS blanket delegation, to engage with consulting parties, Big Rivers Electric and its Consultant proposed an Area of Potential Effect (APE), submitted the results of a records search, and provided recommendations regarding an appropriate level of effort for conducting additional surveys. By letters dated October 15-16,

2020, Burns & McDonnell recommended a finding of no adverse effects to historic properties and cultural resources for surveys completed on the APE for each project component.

Table 1: Recommended findings of effect and Area of Potential Effects (APE) for each project component

Project No.	Recommended Finding	Archeology APE*	Above-ground APE
907: Otter Creek Substation	Finding of no adverse effect to cultural resources and historic properties recommended.	Recommend survey, except in portions covered by previous archaeological surveys.	0.25 mile radius from the center of the facility
908: Brandenburg Steel Mill (BSM) Substation	Finding of no adverse effect to cultural resources and historic properties recommended.	Recommend survey, except in portions covered by previous archaeological surveys.	0.25 mile radius from the center of the facility
909: Redmon Road EHV Switching Station	Finding of no adverse effect to cultural resources and historic properties recommended.	Recommend survey, except in portions covered by previous archaeological surveys.	0.25 mile radius from the center of the facility
1070: Meade County Substation 161 kV Terminal	Finding of no adverse effect to cultural resources and historic properties recommended.	No new survey on previously disturbed site is recommended. If the modification requires expansion or reorientation of the facility, survey is needed to cover the portions of the substation APE outside of the existing footprint.	0.25 mile radius from the center of the facility
830: Meade County to Otter Creek 161 kV Line	Finding of no adverse effect to cultural resources and historic properties recommended.	Portions of the APE (i.e., transmission lien ROW) that have been previously surveyed for archaeological resources do not need to be re-surveyed. The remainder of the transmission line corridors within the APE should be surveyed.	0.25 mile radius from the center of the proposed transmission line route

1071: Redmon Road to Otter Creek 345 kV Line	Finding of no adverse effect to cultural resources and historic properties recommended.	Portions of the APE (i.e., transmission lien ROW) that have been previously surveyed for archaeological resources do not need to be re-surveyed. The remainder of the transmission line corridors within the APE should be surveyed.	0.25 mile radius from the center of the proposed transmission line route
1072: Otter Creek to BSM 345 kV Line	Finding of no adverse effect to cultural resources and historic properties recommended.	Portions of the APE (i.e., transmission lien ROW) that have been previously surveyed for archaeological resources do not need to be re-surveyed. The remainder of the transmission line corridors within the APE should be surveyed.	0.25 mile radius from the center of the proposed transmission line route

**the archaeological APEs also should include any access roads, lay-down or storage areas, and temporary right-of-way necessary to complete the projects*

By letters dated November 11, 2020 and December 17, 2020, the Kentucky SHPO concurred with the recommended finding of no adverse effects to cultural resources and historic

properties. The Shawnee Tribe of Oklahoma responded on November 16, 2020 concurring that no known historic properties will be negatively affected by this Project. The Cherokee Nation responded on December 1, 2020 with no objection to the proposed Project.

Threatened and Endangered Species. There are thirteen (13) federally listed species known to occur in Meade County, Kentucky; they include ten aquatic species (mussels and clams) and three bats. Of these species, there is a potential for the Northern Long-eared bat (NLEB) and the Indiana bat to be affected by the Project due to the removal of approximately 4.2 acres of trees, which are considered potential summer roosting habitat for the species. In coordinating with the U.S. Fish and Wildlife Service's (USFWS), it was determined that the Project would have no adverse effects to both species with the implementation of conservation measures. Appropriate BMPs to protect sensitive species would be implemented, monitored, and maintained during construction of the proposed Project. To mitigate the removal of trees, Big Rivers Electric has agreed to pay compensatory mitigation into the Imperiled Bat Conservation Fund. With implementation of this measure, the USFWS has determined that the Project is consistent with the actions evaluated in its 2015 Biological Opinion, *Kentucky Field Office's Participation in Conservation Memoranda of Agreement for the Indiana Bat and/or Northern Long-eared Bat* (BO). RUS has determined the Project would have no adverse effects to the federally listed species and their designated critical habitat with implementation of these mitigation measures.

Floodplains. Construction of the proposed Project would result in the permanent conversion of floodplains at two locations: the BSM Substation (approximately 1.95 acres) and the Otter Creek Substation (0.99 acres). The EA includes a practicable alternatives evaluation in **Section 3.11**.

For the BSM Substation, which would be located on land owned by Nucor Corporation, alternative for substation sites were evaluated concurrently with the steel mill design analysis. Due to the acreage needed for the steel mill, a requirement for rail access, and constraints on the location boundaries, the main mill building was located as far south as possible; thus, necessitating that the BSM Substation be co-located closely to it. The proposed site fill would result in a maximum flood rise of 0.23 feet in the 100-Yr Water Surface Elevation of Flippins Run, within Nucor's property limits. Though this stream is Zone A and a Floodway is not defined, this rise is below the one-foot rise that would indicate a Floodway Impact, per Kentucky Administrative Regulations (KAR) 4:060. Flood levels at upstream properties will be unaffected.

For the Otter Creek Substation, siting constraints (including finding a suitable parcel that would support co-locating the facility near existing transmission infrastructure) were factored into selection of a preferred substation site. Once the site was selected, a geotechnical report identified sinkholes that must be avoided, this factored into the design of the substation. While 0.99 acres of floodplain would be potentially affected by the substation, the facility itself would be constructed so that no substation equipment would be within the floodplain. All substation equipment would be designed and constructed to be above the flood elevation and outside the floodplain. A Stream Construction Permit was received from the Kentucky Floodplain

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Management Section of the Division of Water on December 10, 2020 (Permit No. 30423) and the Meade County Planning and Zoning Department on December 3, 2020.

Wetlands. Construction of the proposed Project would result in the permanent conversion of approximately 0.5 acres of wetlands at the BSM Substation and 2.22 acres of temporary impacts to wetlands and nine (9) waters of the U.S. crossings within the proposed ROW of the transmission lines. The EA includes a practicable alternatives evaluation in **Section 3.12**.

For the BSM Substation, alternatives for substation sites were evaluated concurrently with the steel mill design analysis. The proposed site would result in a fill to approximately 0.5 acres of wetlands, which is being mitigated through Nucor's permitting effort for the steel mill plant that is currently underway by the U.S. Army Corps of Engineers.

For the transmission lines, structures would be sited and constructed to span waterways and wetlands, thus avoiding direct impacts with the proper implementation of best management practices and erosion sediment controls required by the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit and Erosion and Sediment Control Plans.

F. PUBLIC AND AGENCY INVOLVEMENT

Local newspaper notices, announcing the availability of the EA, a notice of proposed wetland and floodplain action in accordance with Executive Orders 11988 and 11990, and participation under Section 106 of the National Historic Preservation Act, were published on August 20 and 27, 2020, in the Messenger (Meade County, Kentucky). A copy of the EA was available for public review at the Meade County Public Library, located at: 996 Old Ekron Road, Brandenburg, Kentucky 40108. The 14-day comment period ended on September 3, 2020. RUS received no comments.

G. FINDING OF NO SIGNIFICANT IMPACT

Based on its EA, RUS has concluded that the proposed Project would have no significant adverse effects to water quality, wetlands, the 100-year floodplain, land use, aesthetics, transportation, or human health and safety. RUS has concluded that the proposed Project would have no adverse effects to federally listed threatened and endangered species, candidate species, or federally designated critical habitat. The proposed Project would not disproportionately affect minority or low-income populations.

In accordance with the National Environmental Policy Act, as amended (42 U.S.C. 4321 et seq.), the Council on Environmental Quality Regulations (40 CFR 1500–1508), and RUS's Environmental Policies and Procedures (7 CFR Part 1970), RUS has determined that the environmental effects of the proposed Project have been adequately addressed and that no significant impacts to the quality of the human environment would result from construction and operation of the proposed Project. Any final action by RUS related to the proposed Project will be subject to, and contingent upon, compliance with all relevant federal and state

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environmental laws and regulations. Because RUS's action will not result in significant impacts to the quality of the human environment, an Environmental Impact Statement will not be prepared for the proposed Project.

H. RUS LOAN REVIEW AND RIGHT OF ADMINISTRATIVE REVIEW

This FONSI is not a decision on a loan application and therefore not an approval of the expenditure of federal funds. Issuance of the FONSI and its notices concludes RUS's environmental review process in accordance with NEPA and RUS's Environmental Policies and Procedures (7 CFR Part 1970). The ultimate decision as to loan approval depends upon conclusion of this environmental review process in addition to financial and engineering reviews. Issuance of the FONSI and publication of notices will allow for these reviews to proceed. The decision to provide financial assistance is also subject to the availability of loan funds for the designated purpose in RUS's budget. There are no provisions to appeal this decision (i.e., issuance of a FONSI). Legal challenges to the FONSI may be filed in federal district court under the Administrative Procedures Act.

I. APPROVAL

CHRISTOPHER MCLEAN

This Finding of No Significant Impact is effective on signature.

Dated:



Digitally signed by CHRISTOPHER MCLEAN
Date: 2020.12.17 17:28:48 -05'00'

CHRISTOPHER McLEAN
Assistant Administrator
Electric Programs
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Contact Person

For additional information on this FONSI and EA, go to:

<https://www.rd.usda.gov/resources/environmental-studies>; or contact Ms. Suzanne Kopich, Environmental Protection Specialist, Water and Environmental Programs, USDA Rural Utilities Service, at 202-692-4907; or e-mail: suzanne.kopich@usda.gov.