FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

NORTH OAKLAND TO COFFEEVILLE 161-KV TRANSMISSION LINE

EAXX-455-00-000-1725449009

The Tennessee Valley Authority (TVA) proposes to improve the existing power supply in an area of northern Mississippi served by Tallahatchie Valley Electric Power Association (TVEPA). TVA's proposal includes the construction, operation, and maintenance of a new 16.9-mile 161-kilovolt (kV) transmission line between TVEPA's North Oakland Metering Station and TVA's Coffeeville Switching Station in Yalobusha County, Mississippi. This new North Oakland-Coffeeville 161-kV Transmission Line would be in support of the bulk power system.

The proposed 16.9-mile single-circuit transmission line, inclusive of optical ground wire (OPGW), would be centered on a new, 100-foot-wide right-of-way (ROW) totaling about 205 acres. The line would utilize primarily steel, single-pole structures, however some H-frame (multi-pole) structures would also be required.

The new line would terminate into a new breaker bay (Breaker A), which would be added to the east end of the 161-kV switchyard at the Coffeeville161-kV Switching Station. The breaker bay would include bus work, switches, and jumpers. New telecommunications equipment would also be installed. Additionally, communication upgrades and relay protection would be required at the existing Batesville and Oxford 161-kV substations.

TVA plans its transmission system according to industry-wide standards established by the North American Electric Reliability Corporation (NERC). Those standards state that the TVA transmission system must be able to survive NERC defined contingency event while continuing to serve customer loads[1] with adequate voltage and no overloaded facilities, while maintaining adequate transmission line clearances as required by the National Electric Safety Code (NESC).

Currently, under heavy loading conditions, the loss of one of three transmission lines that serve the Batesville, Mississippi service area (Batesville-Oxford [L5131], Batesville-East Batesville [L5352], and East Batesville-Coffeeville [L5854]) results in the overloading of the other two lines. The proposed project would resolve this overloading issue. In addition, three substations – West Batesville, West Charleston, and North Oakland – are currently on a radial line[2] which would eliminate outages for maintenance, shorten outage durations for sustained faults, and bring a third power source to the area to allow additional maintenance flexibility. See for existing system configuration in the area. Any failures could result in loss of service to the area.

Alternatives

Two alternatives are addressed in the associated EA. Under the No Action Alternative, TVA would not implement the proposed action. The Action Alternative involves the purchase of easements for ROW and the construction, operation, and maintenance of the proposed transmission line.

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[1] "Load" is defined as that portion of the entire electric power in a network that is consumed within a given area. The term is synonymous with "demand" in a given area.

[2] A single transmission line from a substation out to a number of customers.

Under the No Action Alternative, TVA would not construct the North Oakland-Coffeeville 161-kV Transmission Line to provide a reliable source of electric power in Yalobusha County, contrary to TVA's mission. As a result, the TVA power system in the service area would continue to operate under current conditions, increasing the risk for substation and transmission overloading, loss of service, and occurrence of violations of NERC reliability criteria. TVA's ability to provide a strong, reliable source of power for continued economic health and future residential and commercial growth in the area would be jeopardized.

In this case, other sources to provide the appropriate power supply could be evaluated. Should transmission service be provided by other sources to construct the new transmission line assets needed to provide power in the area, the potential environmental effects of implementing the No Action Alternative would likely be comparable to those of the Action Alternative described in this chapter. However, some variability of impacts could occur as effects of the construction would be dependent upon various factors, such as the route selected, and the construction methods used.

Considering TVA's obligation to provide reliable electric service, the No Action Alternative is not a reasonable alternative. However, the potential environmental effects of adopting the No Action Alternative were considered in the EA to provide a baseline for comparison with respect to the potential effects of implementing the proposed action.

Under the Action Alternative, TVA proposes to construct a 161-kV single-circuit transmission line between Oakland and Coffeeville in Yalobusha County. TVA's proposed transmission line would encompass approximately 205 acres composed of 16.9-miles new line centered on new 100-ft-wide ROW.

Additionally, to facilitate the operation of the new transmission line, TVA would install a new breaker and bay at the Coffeeville Switching Station. Communication upgrades and relay protection would be required at existing TVA substations: Batesville; North Oakland; Coffeeville; and Oxford. During the development of this proposal, other alternatives were considered. However, upon further study, TVA determined that these alternatives were not feasible for the reasons provided below.

Impacts Assessment

The associated EA documents the site-specific potential effects to the following resources: geology (groundwater), water quality (surface waters), vegetation; wildlife; aquatic ecology; threatened and endangered species (plants, terrestrial animals, and aquatic animals) and their critical habitats; floodplains; wetlands; and managed and natural areas, parks and recreation; archaeological and historic resources.

Potential water quality impacts to shallow groundwater can occur at any location within the construction site due to releases of contaminants such as petroleum fuels, lubricants, and hydraulic fluids associated with the operation and maintenance of construction equipment. However, the use of appropriate Best Management Practices (BMPs) would prevent and minimize the potential for such releases. These BMPs include the proper maintenance of vehicles, restriction of maintenance and fueling activities to appropriate offsite areas, measures to avoid spills, and immediate management of incidental and accidental releases in accordance with standard practice and regulatory requirements.

Construction activities associated with the proposed transmission line would involve ground disturbance for the installation of transmission line structures, resulting in the potential for increased erosion and sediment release, which may temporarily affect local surface waters due

to stormwater runoff. Soil erosion and sedimentation can contaminate and block small streams and threaten aquatic life. Appropriate BMPs would be followed to ensure the proposed action would minimize erosion and sedimentation impacts and possible introduction of pollutants into surface waters. A general construction storm water permit would be needed if more than one acre is disturbed. This permit also requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would identify specific BMPs to address construction-related activities that would be adopted to minimize storm water impacts. Additionally, applicable State of Mississippi and USACE Section 404 Permits would be obtained for impacts to jurisdictional wetlands, stream channels, or other waters of the United States (WOTUS) within the project area. Section 401 Water Quality Certification would be obtained from the state, as necessary, for stream alterations or crossings located within the project area.

Impacts to aquatic life could either occur directly by the alteration of habitat conditions within the stream or indirectly due to modification of the riparian zone and storm water runoff resulting from construction and maintenance activities along the transmission line corridor and access roads. Potential impacts due to removal of streamside vegetation within the riparian zone include increased erosion and siltation, loss of instream habitat, and increased stream temperatures. Other potential effects resulting from construction and maintenance include alteration of stream banks and stream bottoms by heavy equipment and by herbicide runoff into streams.

For any alterations to perennial or intermittent streams, TVA would require SMZs to be implemented. Watercourses that convey only surface water during storm events such as ephemeral streams and wet weather conveyances that could be affected by the proposed site preparation would be protected by standard BMPs and/or standard permit requirements. These measures are designed to minimize disturbance of riparian areas, and subsequent erosion and sedimentation that can be carried to streams. Because appropriate BMPs would be implemented during site preparation and work, impacts to aquatic ecology would be temporary and insignificant as a result of TVA's proposed actions.

Adoption of the Action Alternative would not significantly affect the vegetation communities of the region. Converting a portion of the forested land to an herbaceous community as a result of transmission line and access road construction, along with the potential for future transmission line upgrades would be long-term in duration, but insignificant in relative impact on the affected plant community. Adoption of this alternative would require clearing approximately 172.2 acres of forested habitat, most of which is predominantly composed of evergreen species. Virtually all forested habitat within the proposed project area would be cleared and converted to herbaceous plant communities that are common and well represented throughout the region. Cumulatively, project-related effects to forest resources would be negligible when compared to the total amount of forest land occurring in the region. The Holly Springs National Forest (HSNF) comprises most of the forest found in the region (Central Mississippi) and is made up of over 155,000 acres. Also, project-related work would temporarily affect herbaceous plant communities, but these areas would likely recover to their pre-project condition in less than one year.

Wildlife currently using these habitats would be displaced by habitat removal or alteration. Some immobile individuals may be lost because of construction, particularly if clearing activities take place during breeding/nesting seasons. Construction-associated disturbances and habitat removal would disperse mobile wildlife into surrounding areas to find new food and shelter sources and to reestablish territories. However, the actions are not likely to affect populations of species common to the area, as similarly forested and herbaceous habitat exists in the surrounding landscape. With appropriate implementation of BMPs during construction,

operation, and maintenance of the ROW, impacts to federally or state-listed species are not anticipated to occur as a result of the proposed action.

By implementing both routine and the following non-routine mitigation measures, the proposed transmission line, access roads, and equipment upgrades at existing facilities would have no significant impact on floodplains and their natural and beneficial values:

- Construction would adhere to the TVA subclass review criteria for transmission line location in floodplains.
- Once locations are determined, laydown areas would be analyzed in a separate environmental review.
- Any road improvements for access roads constructed within 100-year floodplains would be done in such a manner that upstream flood elevations would not be increased by more than 1.0 foot.

With wetland avoidance and minimization techniques in place, TVA would comply with all United States Army Corps of Engineer (USACE) and Mississippi Department of Environmental Quality (MDEQ) mitigation requirements to compensate for the proposed loss of wetland resources, functions, and values resulting from the Action Alternative. TVA would obtain the necessary Section 404/401 Clean Water Act (CWA) permits and required compensatory mitigation to ensure the proposed wetland impacts are compensated to the extent deemed appropriate such that wetland functions and values remain at the current capacity within the larger affected watershed. Mitigation required for the project will be purchased through an approved wetland mitigation bank per the directive of the USACE and MDEQ to ensure no more than minimal impacts to the aquatic environment result and the objectives of the CWA anti-degradation policy are upheld.

Construction of the proposed 161-kV transmission line would result in both short-term and long-term impacts to visual resources. During the approximate 12-month construction period, there would be some visual discord from existing conditions due to an increase in personnel and equipment coupled with disturbances of the current site characteristics. However, this would be contained within the immediate vicinity of the construction activities and would only last until all project activities have been completed and the disturbed areas have been seeded and restored through the use of TVA's standard BMPs (TVA 2022). Because of their temporary nature, construction-related impacts to local visual resources are expected to be minor. Given the rural but residential development of the area, construction and utilization of the access roads would have a minor impact on sensitive receptors and scenic quality. The most visible elements of the electric transmission system are the transmission structures and the permanent removal of woody vegetation within the new transmission line ROW which creates a visible corridor. Although much of the proposed transmission line would not be visible to the public due to the distance from developed areas and presence of forested buffers, it would be visible in the foreground to a small number of residences, as well as motorists on nearby roadways, including County Road 211 through the HSNF.

The Proposed Action would not impact any listed or eligible National Register of Historic Places archaeological or architectural sites. Should previously undiscovered cultural resources be identified during Project Site construction or operations, a TVA archaeologist and consulting parties will be consulted before any further action is taken.

Construction, operation, and maintenance of the proposed transmission line would result in minor direct impacts to the area of the HSNF in which the transmission line is being installed and maintained. Impacts to this area would include the initial clearing of trees and vegetation

during the construction phase, and thereafter routine maintenance of the ROW. The Conservation Easement parcel that is adjacent to the project area, is across County Road 211 and would not be directly impacted. Any potential impacts to this area would be temporary and insignificant. These direct, yet insignificant impacts would include construction noise and visual intrusions that would be minimized using standard BMPs.

As most homes in the area are located a considerable distance from the proposed transmission line ROW and/or are separated from these structures by a vegetated buffer, any effects to local property values would be minor. Line construction would ensure that the area has a continuous, reliable source of electric power for its future load growth. Unless action is taken, the increasing power loads caused by commercial and residential growth in the area would result in overloaded transformers and other electrical equipment damage or failure. The proposed action would provide a continuous, reliable source of electric power in the Batesville, Charleston, Coffeeville, and Oakland, Mississippi areas, improve operational and maintenance flexibility, and support load growth and economic development, resulting in long-term indirect economic benefits to the area.

Public Review

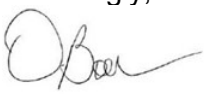
TVA took steps to ensure that the communities in the study area, were meaningfully engaged. All property owners potentially affected by, or near to, any of the route alternative segments were notified via letter and invited to participate in a virtual open house. Additional property owners were sent letters at the discretion of the siting engineer due to proximity or visual impact. Ads were also placed in local newspapers to notify other interested members of the public of the proposed project and open house. TVA considered the public input received during the open house in the alternative route segment evaluation and development of the preferred route.

Mitigation

TVA will implement the routine and non-routine environmental protection measures as listed in the EA. TVA employs standard practices when constructing, operating, and maintaining transmission lines, structures, and the associated ROW and access roads. These can also be found on TVA's Transmission organization's website.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of constructing the North Oakland to Coffeeville 161-kV Transmission Line would not be a major federal action significantly affecting the environment. This finding of no significant impacts is contingent upon adherence to the mitigation measures described above. Accordingly, an environmental impact statement is not required.



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Date Signed

Reference

Tennessee Valley Authority (TVA) 2022. A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Construction and Maintenance Activities, Revision 4. Edited by S. Benefield, R. Brannon, Z. Buecker, C. Buttram, B. Dalton, G. Dalton, C. Henley, W. Martin, A. Masters, C. Phillips, C. Suttles, and R. Wilson. Chattanooga, TN. Retrieved from https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/energy/transmission/a-guide-for-environmental-protection-and-best-management-practices-for-tva-construction-and-maintenance-activities-august-2022ea9924e6-329f-4d3a-a0ac-d66bb9aa0894.pdf?sfvrsn=b9e08843_3 (n.d.).