

FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

BUD CROCKETT-HENDERSON 161-KV TRANSMISSION LINE ENVIRONMENTAL ASSESSMENT CHESTER AND HENDERSON COUNTIES, TENNESSEE

Tennessee Valley Authority (TVA) proposes transmission improvements that would increase electric power reliability in the Lexington and Jacks Creek area of Henderson and Chester counties, Tennessee. TVA would build, operate, and maintain 15.83 miles of the single-circuit, Bud Crockett-Henderson 161-kilovolt (kV) Transmission Line. The proposed project would require approximately 194 acres of new 100-foot-wide right-of-way (ROW). TVA would also install new fiber-optic ground wire on the new transmission lines to facilitate communications with the TVA network.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The EA is incorporated by reference. The EA addresses the construction, operation, and right-of-way (ROW) maintenance of the proposed transmission lines.

Alternatives

Two alternatives (the No Action Alternative and the Action Alternative) were addressed in the EA. TVA also considered other alternatives, including alternative transmission line routes, in identifying its preferred Action Alternative.

Under the No Action Alternative, TVA would not construct the proposed transmission line to serve the Chester County and Henderson County areas. As a result, the TVA power system in the Lexington Electric System (LEC) and Southwest Tennessee Electric Membership Corporation (STEMC) service areas would continue to operate under current conditions, two lines in the area would remain single source lines with no backup, outages would lead to significant load not served, maintenance whether planned or unplanned would require outages, all which will increase occurrences of violations of NERC reliability criteria.

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 would construct, operate, and maintain an approximate 15.83-mile 161-kV transmission line starting at TVA's West Lexington 161-kV Metering Station and extending southwest to TVA's Jacks Creek 161-kV Metering Station to serve the LEC and STEMC service areas.

Impacts Assessment

The EA documents potential effects to the following resources: water quality (groundwater and surface water); aquatic ecology; vegetation; wildlife; endangered and threatened species (aquatic animals, terrestrial animals, and plants) and their critical habitats; floodplains; wetlands; visual resources and noise; archaeological and historic resources; recreation, parks, and managed areas; and socioeconomics and environmental justice.

If the No Action Alternative were adopted, TVA would not construct the proposed transmission lines to serve the LEC and STEMC power service areas, the Bud Crockett-Lexington 161-kV Transmission Line would continue to operate under current conditions, increasing the risk for outages 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.

Potential effects related to prime farmland, transportation, air quality, global climate change, solid waste, hazardous and nonhazardous wastes, and health and safety were considered. Potential effects on these resources were found to be minimal or absent because of the nature of the action.

Based on the analysis of the proposed Action Alternative, there would be no effects to geological characteristics. Potential effects from electromagnetic fields would be minor, and the proposed transmission line would not pose an increased hazard for electric shock or from lightning. Because construction of the proposed transmission line would be short-term, potential effects to local air quality would be minor, and the amount of solid waste produced would be minor. Potential effects from noise would be temporary and minor. Potential effects on traffic would likely be minor and short-term in nature. Potential effects to local visual quality during construction and maintenance activities would be temporary and minor. The transmission line would present a minor, long-term visual effect. Construction, operation, and maintenance of the proposed transmission line could cause shifts in local informal recreation, but these would be minor.

Overall, the Action Alternative would have no disproportionate impacts to disadvantaged populations. Providing an additional source of power would help maintain reliable service in the area, thereby avoiding the potential increase in negative impacts from lack of reliability. No noticeable adverse social or economic effects, including changes in local property values, are likely.

Proposed transmission line construction activities would involve ground disturbance resulting in the potential for increased erosion and sediment release, which may temporarily affect local surface water and aquatic ecology via stormwater runoff. Aquatic ecology could also be affected by alteration of stream habitat conditions. Because standard best management practices (BMPs) and streamside management zones (SMZs) would be implemented during construction, operation, and maintenance of the proposed project, potential effects to surface water, groundwater and aquatic ecology would be minor, temporary, and insignificant.

The proposed transmission line would cross floodplain areas of several streams. Efforts were made during the siting process to avoid or minimize impacts to floodplains. However, because of other social, environmental, and engineering factors considered in the siting process, there was no practicable alternative that would allow for complete avoidance of floodplains. Consistent with Executive Order (EO) 11988, overhead transmission lines and related support structures are considered to be repetitive actions in the 100-year floodplain (46 FR 22845). The conducting wires of the transmission line would be located well above the 100-year flood elevation. The laydown yards would be located outside of the 100-year floodplain, which would be consistent with EO 11988. Portions or all of some access roads would be located within the 100-year floodplain.

To minimize adverse impacts, any road improvements in 100-year floodplains but not floodways would be done in such a manner that upstream flood elevations would not be increased by more than 1.0 foot. Portions of access roads to Structures 102 and 105 would be located within the floodway of an unnamed tributary of Beech River. To minimize adverse impacts on natural and beneficial floodplain values, TVA will implement standard BMPs during construction and adhere to the TVA subclass review criteria for transmission line location in floodplains. As such, construction, operation, and maintenance of the proposed transmission line would have no significant impact on floodplains.

Construction of the proposed transmission lines would result in the clearing of approximately 98 acres of forest. At the local level, this would constitute a minor loss of forest resources. Almost all the forests within the footprint of the proposed ROW area have been previously cleared. Areas of native vegetation within the proposed ROW construction sites would be adversely affected by clearing, but most sites would likely recover to pre-project conditions within a few years. With commitments and BMPs in place, ROW clearing and maintenance would displace various wildlife species, but would not adversely affect local populations and it is expected that they would return to the project area upon completion of actions.

One record of the state-listed coal skink is known approximately 1.0 miles from the project area. This species uses a variety of habitats. Project activities may cause minor impacts to coal skinks but protection of SMZs would minimize impact and would not permanently impact their populations.

Suitable summer roosting habitat surveys for the federally listed northern long-eared bat resulted in the identification of 44 suitable forested areas, totaling 62.3 acres. As part of TVA's Endangered Species Act (ESA) Programmatic Agreement (PA) biological assessment for bats, TVA programmatically quantified and will minimize removal of potentially suitable summer roosting habitat during the time of potential occupancy by northern long-eared bat. A number of activities associated with the proposed action, including tree clearing, were addressed in TVA's PA biological assessment for evaluating impacts of routine actions on federally listed bats in accordance with ESA Section 7(a)(2). For those activities with the potential to affect federally listed bats, TVA committed to implementing specific conservation measures. Therefore, direct and indirect impacts to federally listed bat species are expected to be minor.

The proposed project would span 6.67 acres of wetland, requiring the conversion of about 3.74 acres of forested and scrub-shrub wetlands to emergent wetlands. The forested wetlands would be cleared during construction. Similarly, all wetland areas located within the proposed ROW would be subject to periodic vegetation management and maintained as herbaceous or scrub-shrub wetland vegetation. Efforts were made during the transmission line Planning and Siting process to avoid or minimize wetlands. However, because of project and topographic

constraints, and because of the goal of minimizing impacts to other environmental and social resources, no practicable alternative was available that would allow complete avoidance of wetlands. Potential wetland impacts would be reduced during the transmission line construction and ROW maintenance activities through implementation of appropriate BMPs and compliance with all federal and state wetland regulations. Due to the minimal wetland conversion proposed relative to forested wetland present at a watershed scale, no significant wetland impacts are anticipated to result from this project. The proposed action is consistent with the Protection of Wetlands EO 11990.

TVA conducted a Phase I archaeological survey to identify historic properties in the undertaking's area of potential effect (APE). The survey resulted in the identification of a single non-site cultural resource (IF1/ Native American). TVA determined, in consultation, that the non-site cultural resource is ineligible for National Register of Historic Places (NRHP) listing under Criteria A, B, and C. Two of the Henderson County NRHP-listed properties are located within the half-mile background study area. Furthermore, five previously recorded architectural resources are located within the APE in Chester County and one previously recorded architectural resource within Henderson County. None of the previously identified architectural resources are within the viewshed of the proposed ROW or transmission line structures, and therefore are outside of the architectural APE. TRC recorded 26 architectural resources in Chester County and 45 architectural resources in Henderson County. None warranted further investigation due to the lack of historical and/or architectural. Based on this, TVA recommended that none of the 71 properties are considered eligible for the NRHP

TVA completed consultation with the Tennessee State Historic Preservation Office (THPO) and federally recognized Indian tribes. These consulting parties agreed with TVA's determinations regarding the NRHP eligibility of all cultural resources identified in the APE and that the proposed undertaking will result in no adverse effects on historic properties.

Public Review

TVA developed a public communication plan that included a website with information about the project, a map of the alternative routes, and numerous feedback mechanisms. TVA held a virtual open house from September 24 through October 24, 2020. Public officials and property owners who could potentially be affected by, or lived near, any of the route alternatives were invited to the virtual open house. TVA used local news outlets and notices placed in local newspapers to notify other interested members of the public of the virtual open house. The virtual open house included a virtual interactive map that allowed attendees to enter their address to see how the proposed project might affect their property. A toll-free phone number was provided to facilitate comments for those who did not want to submit comments through the virtual open house, email or U.S. mail. A 30-day public review and comment period was held following the virtual open house, during which TVA accepted public comments on the alternative transmission line routes and other issues.

Mitigation

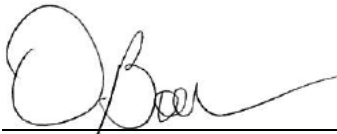
TVA will implement the routine environmental protection measures listed in the EA. In addition to those routine measures, the following non-routine measures will be implemented to reduce potential adverse environmental effects:

To prevent an obstruction in the unnamed tributary of Beech River floodway:

1. Any fill, gravel or other modifications in the floodway that extend above the pre-construction road grade would be removed after completion of the project.
2. Excess material would be spoiled outside of the published floodway.
3. The area would be returned to its pre-construction condition.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, TVA concludes that the proposed actions included in Bud Crockett-Henderson 161-kV Transmission Line project in Chester and Henderson counties, Tennessee 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.).