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FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
MOSCOW-MILLER POWER SYSTEM IMPROVEMENTS
FINAL ENVIRONMENTAL ASSESSMENT
FAYETTE COUNTY, TENNESSEE AND DESOTO AND MARSHALL COUNTIES, MISSISSIPPI

The Tennessee Valley Authority (TVA) proposes to improve the existing power supply in both Fayette County, Tennessee (TN) and DeSoto and Marshall Counties, Mississippi (MS). TVA's proposal would construct, operate, and maintain two switching stations (Chickasaw Trails Industrial Park 161-kV Switching Station and Diffee 161-kV Switching Station), an 18.5 mile Diffee-Chickasaw Trails Industrial Park 161-kV Transmission Line (TL) and associated 161-kV loop TLs, rebuild 2.5 miles of double-circuit 161-kV TL, as well as the addition of Fiber Optic Groundwire (OPGW) to the existing TVA transmission system.

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 TL.

Alternatives

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

Under the No Action Alternative, TVA would not construct the two proposed switching stations, the new 18.5-mile Diffee-Chickasaw Trails Industrial Park 161-kV TL and 161-kV loop lines, rebuild 2.5 miles of double-circuit 161-kV LT, or OPGW additions. As a result, the TVA power system within the Fayette County, TN and DeSoto and Marshall Counties, MS areas would continue to operate under current conditions, increasing the risk of voltage and thermal loading problems, loss of service, and occurrences of violations to North American Electric Reliability Corporation (NERC) reliability criteria. TVA's ability to provide reliable service and add electrical capacity to support economic development within the area, including the Chickasaw Trails Industrial Park, would be jeopardized, which would not support TVA's overall mission.

Considering TVA's obligation to provide reliable electric service and support economic development within the Valley, 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 the two proposed switching stations, the new 18.5-mile Diffee-Chickasaw Trails Industrial Park 161-kV TL and 161-kV loop lines, rebuild 2.5 miles of double-circuit 161-kV TL, and OPGW additions. Additionally, TVA proposes to replace relays and complete communications upgrades at the existing Hickory Valley, Holly Springs, Miller and Olive Branch 161-kV substations as well as the Cordova 500-kV Substations.

To ensure that the areas within Fayette County, TN and DeSoto and Marshall Counties, MS have a continuous reliable source of power, and that the Chickasaw Trails Industrial Park has additional electrical capacity for future load growth, TVA would provide new electric service to the area. The construction of these power system improvements would meet these needs. Additionally, the proposed project would further enhance TVA's Bulk Transmission System by improving operational and maintenance flexibility, and finally would support economic development in the Chickasaw Trails Industrial Park.

Impacts Assessment

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

If the No Action Alternative were adopted, a decline in the reliability of electric service for some customers would be likely in the future. Service problems and interruptions likely would gradually become more frequent and more severe. These outages would have negative impacts on the ability of businesses in the area to operate. Residents of the area would also incur negative impacts from outages, such as more frequent loss of power. These conditions would diminish the quality of life for residents in the area and would likely have negative impacts on property values in the area. Potential socioeconomic effects under the No Action Alternative would likely affect all populations in the region negatively.

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 TL would not pose an increased hazard for electric shock or from lightning. Because construction of the proposed 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 would be temporary and minor. Construction, operation, and maintenance of the proposed TL 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.

Because appropriate best management practices (BMPs) will be implemented during construction, operation, and maintenance of the proposed TL, potential effects to groundwater would be minor and insignificant. For similar reasons, any effects to surface water quality and aquatic life are expected to be temporary and minor.

The proposed TL 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 TLs and related support structures are considered to be repetitive actions in the 100-year floodplain (46 FR 22845). The conducting wires of the TL

would be located well above the 100-year flood elevation. Portions of access roads could be located within the 100-year floodplain. The laydown yards would be located outside of the 100-year floodplain, which would be consistent with EO 11988.

To minimize adverse impacts, any road construction or improvements will be done in such a manner that upstream flood elevations will not be increased. 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 TL location in floodplains. As such, construction, operation, and maintenance of the proposed TL would have no significant impact on floodplains.

Construction of the proposed TL would result in the clearing of approximately 121 acres of forest. At the local level, this would constitute a minor loss of forest resources. Almost all of the forests within the footprint of the proposed ROW area have been previously cleared. Areas of native vegetation within the proposed ROW and substation construction sites would be adversely affected by clearing, but most sites would likely recover to pre-project conditions within a few years. 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.

No federal or state-listed terrestrial animal species were documented within three miles of the project footprint. However, four federally listed terrestrial animal species were assessed based on county occurrence records or the potential for species to occur in the project area. The federally endangered interior least tern was assessed based on documented presence within Desoto County, MS. No interior least terns were observed during field surveys in March and October 2018. The project footprint also lacks suitable tern nesting and foraging habitat. All county records are associated with the MS River. Interior least tern would not be impacted by the proposed project activities.

The federally threatened wood stork was assessed based on the potential to occur throughout Mississippi. Wood storks do not breed in Mississippi, however, vagrant individuals are believed to occur statewide. No wood storks were observed during field surveys in March and October 2018. The project footprint contains suitable wood stork foraging and roosting habitat in forested wetlands, streams, and a pond. The proposed project may clear potential roosting habitat and increase foraging habitat. Similar habitat is abundant in the project area. With BMPs in place, water quality and hydrology would not be affected. Wood storks are not likely to be impacted by the proposed actions.

Approximately 48.91 acres of suitable summer roosting habitat for the federally listed northern long-eared bat (NLEB) occurs in the proposed ROW corridor. As part of TVA's Endangered Species Act (ESA) Programmatic Agreement (PA) biological assessment for bats, TVA programmatically quantified and minimized removal of potentially suitable summer roosting habitat during the time of potential occupancy by NLEB. During field surveys TVA documented 85 suitable roost trees along the proposed ROW and within the switching station sites. 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 37.44 acres of wetland, requiring the conversion of about 26.27 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 TL ROW would be subject to periodic vegetation management, and maintained as herbaceous or scrub-shrub wetland vegetation or open water. Efforts were made during the TL 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 TL 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 114 newly recorded architectural resources in TN and 13 in MS. For the 127 newly recorded resources, TVA determined, in consultation, that none of the individual houses/buildings are eligible for National Register of Historic Places (NRHP) listing due to lack of architectural distinction and inability to associate these resources to historic person(s) or event(s). A portion of the Memphis and Charleston Railroad is also located within the viewshed and TVA finds the Memphis and Charleston Railroad as eligible for NRHP listing. However, the surrounding viewshed has already been altered by the construction of modern highways, roads, and residential developments while much of the associated infrastructure such as the Moscow Railroad depot is no longer extant. TVA completed consultation with the Mississippi State Historic Preservation Officer (SHPO) and Tennessee State Historic Preservation Office (THPO) and federally recognized Indian tribes. These consulting parties agreed with TVA's determinations regarding the National Register of Historic Places eligibility of all cultural resources identified in the APE and that the proposed undertaking will result in no 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 feedback mechanisms. Public officials and property owners who could potentially be affected by, or lived near, any of the route alternatives were invited to a project open house. TVA used local news outlets and notices placed in the local newspapers to notify other interested members of the public of the open houses. The open house was held in Slayden, Mississippi on August 10, 2017. At the open house, TVA presented a network of alternative TL routes, comprised of 19 different line segments. A 30-day public review and comment period was held following the open house, and TVA accepted public comments on the alternative TL 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 compensate for the impacted 26.27 acres of forested and scrub-shrub wetlands to emergent wetlands, TVA would mitigate the loss of trees by purchasing wetland mitigation credits prior to construction of the proposed TL.

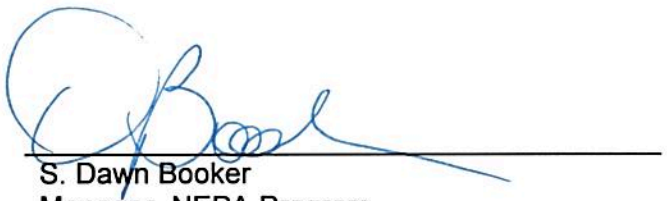
- As part of TVA's PA biological assessment for bats, TVA would track and document the removal of potentially suitable summer roost trees and include this information in annual reporting in accordance with ESA Section 7(a)(2) consultation. Additionally, if removal of suitable bat roost tree habitat needs to occur when bats may be present on the landscape, TVA would conduct mist net surveys and/or set aside funding to be applied towards future bat-specific conservation projects in accordance with the PA biological assessment.

- TVA project staff would contact Ames Plantation to inform them of the project and to avoid any impacts to scheduled recreational or educational activities.

- On the Diffee-Chickasaw Trails Industrial Park 161-kV TL, road construction or improvements would be done in such a manner that upstream flood elevations would not be increased by more than 1.0 foot.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed actions included in improving power supply to Fayette County, TN and DeSoto and Marshall Counties, MS 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.



10/15/19

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Date Signed