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FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
UNION-TUPELO 161-KV TRANSMISSION LINE

There are two 161-kilovolt (kV) transmission lines that serve the Tennessee Valley (TVA) Tupelo 161-kV Substation from its Union 500-kV Substation. The Union-Tupelo No. 1 161-kV Transmission Line has multiple delivery point connections (substations) along its path. The Union-Tupelo No. 2 line has no delivery point connections, and serves as a backup to the Union-Tupelo No. 1 line. The reliability of the Union-Tupelo No.1 Transmission Line is considered a risk due to the total load (i.e., power demand), as well as the number of delivery points on this transmission line. The loss of any section of this line during heavy electrical usage could result in an overloading of the Union-Tupelo No. 2 Transmission Line.

The Tennessee Valley Authority (TVA) proposes to improve the existing power supply system in Union and Lee counties and surrounding areas in Mississippi by constructing, operating, and maintaining a third 161-kV transmission line between the Union 500-kV Substation in Union County and the Tupelo 161-kV Substation in Lee County. The new Union-Tupelo No. 3 line would consist of both new and existing power lines. Specifically, a new 16-mile section would be constructed from the Union 500-kV Substation to a tap point adjacent to Tombigbee Electric Power Association's Turner Park 161-kV Substation. This new transmission line would connect to the existing 6.6-mile Tupelo-Turner Park 161-kV Transmission Line, completing a third electrical connection between the Union 500-kV Substation and the Tupelo 161-kV Substation.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The EA is incorporated by reference.

Two alternatives (the No Action Alternative and the Action Alternative) were addressed in the EA. Under the No Action Alternative, TVA would not implement the proposed action. The Action Alternative involves the construction, operation, and maintenance of a third 161-kV transmission line between the Union 500-kV Substation and the Tupelo 161-kV Substation. The new line would utilize double steel-poles on a 100-foot-wide right-of-way (ROW). Access roads would be required for construction and maintenance of the new line. Additionally, TVA would install a new breaker and bay at the Union 500-kV Substation, and a new transformer at the Tupelo 161-kV Substation. The TVA map board displays would be updated to reflect the new facilities. The Action Alternative is TVAs preferred alternative.

In addition two other alternatives were developed. One involved rebuilding the existing Union-Tupelo No. 2 161-kV Transmission Line. The other involved construction of a new four-breaker Bankhead 161-kV Switching Station and approximately 16 miles of new 161-kV transmission line from this new switching station to the Tupelo 161-kV Substation. Both of these options were evaluated but were considered impractical and were eliminated from further consideration in the EA.

Based on our analysis, there would be no effects to geological characteristics. Likewise, no potential effects to recreational facilities or to the opportunities they provide are expected. There would be no disproportionate effects to minority or economically disadvantaged

populations. No odors would be produced from the construction, operation or maintenance of the proposed transmission line.

Because appropriate best management practices would be implemented during construction, operation, and maintenance of the proposed transmission line, 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.

Construction of the proposed transmission line would result in the clearing of approximately 73 acres of forest. At the local level, this would constitute a minor loss of forest resources. Areas of native vegetation within the proposed ROW would be adversely affected by clearing, but most sites would likely recover to pre-project conditions within a few years. Less than 1 acre of Blackland Prairie habitat would be affected. Undertaking the project would have a minor effect on the extent and abundance of invasive plant species.

Establishing the ROW would result in the loss of 2.5 acres of riparian forest habitat. ROW clearing and maintenance would displace various wildlife species, but would not adversely affect local populations. Construction of the proposed transmission line would not result in any increase in flood hazard from increased flood elevations or changes in the flow-carrying capacity of streams that would be crossed. Potential effects to local visual quality would be minor, and effects from noise would be temporary and insignificant.

Construction of the ROW for the proposed transmission line would involve clearing of approximately 73 acres of forest. Approximately 121 acres of the ROW would cross open areas that contain soils that qualify as prime farmlands. However, use of property for a ROW does not preclude the continued use of land within the ROW for agriculture. Potential effects to local property values would be minor. Potential effects from electromagnetic fields (EMF) 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 line would be short-term, potential effects to local air quality would be minor and insignificant, and the amount of solid waste produced would be minor.

The proposed project would not affect the federally listed Price's potato bean, because it does not occur in the project area. The state-listed American bladdernut would be negatively affected, but effects would be minor. Adverse effects to the eastern purple coneflower would be avoided. Because suitable habitat for the federally listed Bachman's sparrow does not occur in the project area, there would be no effects to this bird. Because suitable habitat for the Mitchell's satyr butterfly would be maintained in the ROW, the proposed project would not adversely affect this species. Approximately 13.45 acres of suitable summer roosting habitat for the federally listed Indiana bat and the northern long-eared bat (proposed for federal listing) occurs in the proposed ROW corridor. These areas would be cleared between December 1 and March 15 to avoid directly affecting these species. TVA consulted with the U.S. Fish and Wildlife Service, which concurred that the proposed project would not likely adversely affect any protected species or their habitats.

The proposed project would span 16.58 acres of wetland, requiring the conversion of 9.25 acres of forested wetlands to emergent/scrub-shrub wetlands. The forested wetlands, considered moderate quality (i.e., TVARAM Category 2), would be cleared during construction and then maintained as emergent/scrub-shrub wetlands for the life of the line. Similarly, all wetland areas located within the proposed transmission line 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 transmission line siting process to avoid wetlands. However, because of project and topographic constraints, and because of the goal of minimizing impacts to other environmental resources, no practicable alternative was available that would allow complete avoidance of wetlands. Consistent with EO 11990, potential wetland impacts would be reduced to an insignificant level during the transmission line construction and ROW maintenance activities through implementation of appropriate BMPs (Muncy 2012).

The proposed project would be subject to mitigation requirements under the USACE's regulations implementing Section 404 of the CWA. The impact on these wetlands would also be subject to review under EO 11990. Based on preliminary discussions between TVA and the USACE, mitigation would be required for the loss of trees and associated forested wetland functions resulting from the proposed project. TVA would purchase credits per USACE requirements from an approved mitigation bank prior to construction of the transmission line.

The proposed actions would have no effects on archaeological resources within the ROW that are listed in or eligible for listing in the NRHP, provided TVA uses wetland BMPs (i.e., mats) to prevent ground disturbance within the archaeological sites. The Mississippi State Historic Preservation Office (SHPO) agreed with this determination as well as finding that there would be no adverse effects to local historic architectural resources or to the Natchez Trace Parkway.

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 were briefed on the project. The 421 property owners who could potentially be affected by any of the route alternatives, along with 11 public officials, 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 house. The open house was held on September 13, 2012, at the BanCorp South Conference Center in Tupelo, Mississippi. At the open house, TVA presented a network of seven alternative transmission line routes, comprised of 15 different line segments, to the public for comment. A 30-day public review and comment period was held following the open house, and 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, as described in Section 2.5 of the EA, would be implemented to reduce the potential for adverse environmental effects.

- TVA will selectively remove suitable Indiana and/or northern long-eared bat habitat between December 1 and March 15, i.e., when this habitat is unoccupied because the bats are hibernating elsewhere (see Section 4.6.2.3 of the EA).

- To compensate for the conversion of 9.25 acres of forested wetlands to herbaceous/shrub/scrub wetlands, TVA will mitigate the loss of trees by purchasing wetland mitigation credits prior to construction of the proposed transmission line.

- To avoid potential adverse effects to archaeological sites 22UN747, 22UN752, 22LE1074, and 22LE1075, work in the vicinity of these four sites will be performed using wetland BMPs (i.e. mats) within the sites' boundaries (see Section 4.10.2 of the EA)..

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of constructing a 16-mile long 161-kV transmission line to supply power from the Union 500-KV Substation to the Tupelo 161-kV Substation 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.

10/9/14

Date Signed

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