

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
**FIVE POINTS-HOMEWOOD 161-KV TRANSMISSION LINE**  
**SCOTT COUNTY, MISSISSIPPI**

**Proposed Action and Need**

In order to deliver a reliable source of electric power to central Mississippi, the Tennessee Valley Authority (TVA) proposes to construct a new 161-kilovolt (kV) transmission line that would interconnect the TVA transmission system with the Southern Mississippi Electric Power Association (SMEPA). The new line would consist of two sections. The first segment, which would be approximately 6 miles long, would be built on new right-of-way. It would begin at the Five Points Substation (owned by Central Electric Power Association) and would extend to a point near Lake, Mississippi. The second section would extend from this point to SMEPA's Homewood Substation, a distance of approximately 11.5 miles. This second segment would be built on existing SMEPA right-of-way currently occupied by a 69-kV transmission line. TVA proposes to construct a new 161-kV transmission line and rebuild the 69-kV line on this existing right-of-way. These two lines would share structures.

Additionally, various equipment upgrades would be made at the Philadelphia Substation, the Tupelo Substation, a repeater station near Forest, Mississippi, and the Power Business Center in Chattanooga. These upgrades would allow TVA to monitor the proposed transmission line and remotely control power transmission on the line.

TVA has reviewed the proposed action and reasonable alternatives in an Environmental Assessment (EA) in accordance with its procedures implementing the National Environmental Policy Act (NEPA). This EA is incorporated by reference.

**Alternatives**

Two alternatives, i.e., Alternative A (the No Action Alternative) and Alternative B (the Action Alternative), were developed. Three other alternatives were considered initially. However, these were found to be infeasible and were eliminated from further study. The two alternatives are described below.

Under the No Action Alternative, TVA would not construct the proposed transmission line. Consequently, the transmission system in east central Mississippi would continue to operate with a high risk of interruption under certain conditions. The likelihood of failure would increase over time as local power demands increase. Adoption of this alternative would not adequately respond to the identified need.

Under the Action Alternative, TVA would construct a new six-mile long 161-kV transmission line from the Five Points Substation to a point near Lake, Mississippi. From this point, TVA would rebuild 11.5-miles of an existing 69-kV line and install a new 161-kV line to the Homewood Substation. The 69-kV and 161-kV lines would share common structures on the existing right-of-way. TVA would maintain the right-of-way for the new line segment from the Five Points Substation to the edge of the SMEPA service area. SMEPA would be responsible for right-of-way maintenance for that portion of the line within its service area, including the 11.5-mile segment. TVA would also install remote control and monitoring equipment at several locations to serve the proposed line.

## Impacts Assessment

Under the No Action Alternative, the proposed transmission line would not be built. Consequently, there would be no potential environmental effects related to construction and operation of a transmission line. Under the Action Alternative, the proposed transmission line would be built. A summary of the potential effects of adopting this alternative follow.

Construction of the 6-mile new line segment would involve about 75 acres, and approximately 24 acres of forest would be cleared. Native vegetation of the local area has been altered by past land uses; thus, potential effects to plants would be minor and regionally insignificant. Field surveys indicated the presence of several invasive exotic plants. Appropriate measures consistent with TVA construction guidelines would be implemented to prevent the spread of these noxious plant species. The existing right-of-way contains two small areas of Jackson Prairie, a vegetation community that provides suitable habitat for a state-listed plant, the Great Plains ladies'-tresses. Field surveys also found three state-listed plant species (Carolina anglepod, eastern purple coneflower, and climbing milkweed) in the existing right-of-way. Areas containing these plants will be avoided during project construction; thus, no effects to these rare plants are expected. No federally listed plant species are known to occur on the project route, and none were found during field surveys. Therefore, there would be no effects to any federally listed plant species.

Because of the already fragmented nature of the landscape, the project would not adversely affect common wildlife or their habitats. There are nine terrestrial animal species known from the Scott, Newton, and Smith county area that are considered rare, but they have no official state status. Three additional species (ringed map turtle, red-cockaded woodpecker, and Louisiana black bear) known from these three counties are threatened or endangered at the state and federal levels. Suitable habitat for most of these species, including the ringed map turtle, does not exist on the transmission line route. Habitat for bears is of low quality due to forest fragmentation. No threatened or endangered terrestrial animals were encountered during field surveys. Although historic records indicated the presence of red-cockaded woodpeckers near the existing transmission line right-of-way, no suitable nesting habitat was found during field surveys. Because threatened and endangered animals were not observed and based on the lack of suitable habitat, TVA determined that the proposed project would not affect any federally listed threatened or endangered animal species. The U.S. Fish and Wildlife Service concurred with this determination.

In order to protect surface water quality, construction activities would include the application of appropriate best management practices and would be done in accordance with TVA construction guidelines. Thus, potential effects to surface water quality and aquatic life would be insignificant. Potential adverse effects to the Jackson Prairie crayfish, a state-listed species which may occur on the existing right-of-way, are not expected. No federally listed threatened or endangered aquatic animals are known to occur within 10 miles of the project area. Therefore, there would be no effects to federally threatened or endangered aquatic animal life.

Clearing for the new right-of-way would convert 0.37 acres of forested wetlands to scrub-shrub or emergent habitat wetlands. Remaining wetland areas would be spanned and would remain in their current state. To compensate for the wetland conversion, TVA would purchase one credit from the Pearl River Mitigation Bank to meet U.S. Army Corps of Engineers mitigation requirements. With this compensatory compensation in place, potential effects to wetlands would be insignificant.

Construction of the new transmission line is not expected to cause significant effects to groundwater.

The proposed transmission line route would cross a predominantly rural area containing few major roads. During construction, there would be some minor and temporary visual discord. Post-construction changes to the visual landscape would be minor and insignificant.

Approximately 1.5 miles of existing right-of-way crosses the Bienville National Forest. Because construction of the line would not involve any additional clearing within the National Forest, potential effects to the Forest would be insignificant. The route is near four managed areas; however, because of the distance (0.7 miles or more) these areas would not be affected. No streams included on the Nationwide Rivers Inventory are located near the project area, and no such rivers would be affected by the proposed action.

The proposed transmission line would not affect recreation resources or recreational opportunities significantly. Location of transmission line structures in the floodplain areas along the route would not increase flood hazard, and the line is not expected to adversely affect floodplains.

No historic resources were located within the Area of Potential Effect for the project. TVA determined that no historic properties eligible for listing or currently listed on the National Register of Historic Places would be affected by the proposed action. The Mississippi State Historic Preservation Officer concurred with this determination.

### **Mitigation**

The following routine measures would be implemented to reduce the potential for adverse effects:

- Appropriate best management practices (BMPs) would be implemented during construction activities.
- During construction and operation of the proposed transmission line, the environmental quality protection specifications as described in Appendices A, B, C, and D of the attached EA would be implemented.

The following nonroutine measures would be applied during construction and operation of the proposed transmission line to reduce the potential for adverse environmental effects:

- A group of climbing milkweed plants on the existing right-of-way would be avoided during construction activities.
- Two areas of Jackson Prairie that provide potential habitat for the Great Plains ladies'-tresses would be avoided during construction activities on the existing right-of-way.
- To reduce potential habitat fragmentation associated with construction and to avoid impacts to wetland WJB03, access to the immediate area around this wetland area would be from a grazed pasture on the west side of WJB03.
- TVA would purchase one credit from the Pearl River Mitigation Bank to compensate for the conversion of 0.37 acres of forested wetland to scrub-shrub or emergent wetland.

With the implementation of these measures and safeguards, potential adverse effects are expected to be insignificant.

### **Public and Intergovernmental Review**

The Mississippi SHPO was contacted in accordance with the provisions of the National Historic Preservation Act regarding concurrence with TVA's determination of no effect to historic properties. The SHPO concurred with that determination in a letter of August 11, 2005.

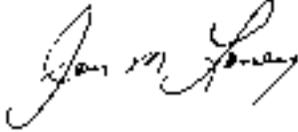
The Jackson, Mississippi, field office of the U.S. Fish and Wildlife Service was contacted regarding TVA's determination of no effect to the endangered red-cockaded woodpecker. The Service concurred with this determination (see Appendix F of the attached EA).

### **Conclusion and Findings**

The proposed project would not affect any species federally listed as threatened or endangered. TVA determined that the proposed undertaking would not have the potential to affect any historic properties that are potentially eligible, are eligible, or are currently listed on the National Register of Historic Places.

Placement of transmission line support structures in the 100-year floodplain is consistent with Executive Order 11988, as there would be no increase in the flood hazard. Potential effects to wetlands would be minor and insignificant, and the action complies with Executive Order 11990. Similarly, potential effects to visual character, recreational opportunities, and natural areas would be insignificant. Because appropriate measures would be implemented to protect surface water and groundwater quality, potential effects to water quality and aquatic life would be insignificant. The proposed action would not disproportionately affect any minority or economically disadvantaged groups and would be consistent with Executive Order 12898 (Environmental Justice).

Environmental Stewardship and Policy staff have reviewed the subject EA and determined that the potential environmental consequences of TVA's proposed transmission line have been addressed adequately in the EA. Based on the findings in the EA, including implementation of the required mitigation, TVA concludes that the proposed action is not a major federal action significantly affecting the quality of the environment. Accordingly, an Environmental Impact Statement is not required.



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Date Signed