

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
**CALPINE'S MORGAN ENERGY CENTER – PROVIDE INTERCONNECTION**  
**MORGAN COUNTY AND LIMESTONE COUNTY, ALABAMA**

**The Proposed Action**

Tennessee Valley Authority (TVA) proposes to interconnect Calpine's new Morgan Energy Center generating plant to TVA's transmission system at TVA's Limestone Substation. TVA would construct 5.5 miles of new 161-kilovolt (kV) transmission line on existing right-of-way and 2.8 miles of new 161-kV transmission line on new right-of-way 100 feet in width in Limestone County, Alabama. The proposed transmission line would be built using double-pole (H-frame) steel structures between the Limestone Substation and a point west of U.S. Highway 31 near the railroad tracks where it would connect to a 12.5-mile section of previously constructed transmission line that leads to Calpine's Morgan Energy Center. The new section of right-of-way would occupy about 25 acres. TVA has prepared an Environmental Assessment (EA) and a Supplemental EA that are incorporated by reference.

**Background**

The purpose of the proposed action is to comply with provisions of the Federal Power Act by providing an interconnection to the TVA transmission line system as requested by Calpine for its Morgan Energy Center.

**Alternatives**

While planning this project, TVA considered various means of providing an interconnection to Calpine's Morgan Energy Center. TVA's original proposal to connect to the General Motors Substation (TVA, 2003) was determined not to be viable due to business issues that developed between TVA and General Motors after the completion of the EA. The proposed action (the Preferred Alternative) would utilize most of the previously constructed original transmission line right-of-way for the interconnection and would require 8.3 miles of new transmission line to connect to the existing Limestone Substation. Because of requirements mandated by the Federal Power Act, TVA does not have the discretion to take no action in this situation, and the No Action Alternative was deemed unreasonable.

The proposed transmission line right-of-way was identified as preferred based on a number of factors including public input, reduction of potential environmental impacts, less property-ownership impacts, and avoidance of cemeteries, schools, and other cultural features. This Preferred Alternative is analyzed in detail in the Supplemental EA.

## Impacts Assessment

The Supplemental EA concludes that the impacts to terrestrial plant and animal communities would be insignificant. No uncommon plant or animal communities occur in the project area. Approximately 26 acres of land along the 8.3-mile transmission line is forested and would be converted to nonforested habitats. The forest in this area is already heavily fragmented, and the impacts of the resulting forest loss and increased forest fragmentation would be small.

Two federally listed terrestrial animal species are known from Limestone County and adjacent Morgan County. Clearing within the new section of right-of-way would occur between September and December, during a time that these species would hibernate in caves. No habitat is present in the immediate vicinity of the 8.3-mile section of transmission line, and habitat for these two species along the entire length of transmission line is rare and of low quality. Three federally listed aquatic animal species have also been recorded from within several perennial streams that would be crossed along the 8.3-mile transmission line right-of-way. In addition to the implementation of planning and construction measures to minimize any potential direct effects, these streams would be designated for Unique Water Habitats Stream Protection (Category C) as outlined in Muncy (1999) to minimize the potential for indirect effects during construction due to erosion and sedimentation. With these protective measures, no impacts to federally listed species are anticipated as a result of the proposed action.

Seven terrestrial plants, five terrestrial animals, and three aquatic animals, all state listed, have also been reported from the project area. Potential habitat along the proposed transmission line was identified for four of the state-listed terrestrial animal species. Additionally, the three state-listed aquatic animal species have been reported from several perennial streams crossed by the proposed transmission line right-of-way. With the implementation of Best Management Practices (BMPs) during construction and Category C protection on streams, no adverse impacts to these or any other state-listed terrestrial or aquatic animal species are anticipated.

The proposed transmission line and access roads would cross 11 separate wetland areas with a total area of about 10.82 acres. Approximately 6.55 acres of wetlands, comprised of emergent and scrub-shrub are located in the existing transmission line rights-of-way. These wetlands are already periodically cleared by mowing or other methods during routine right-of-way maintenance. Along the new transmission line connection rights-of-way, wetlands are comprised of approximately 4.21 acres forested, 3.21 acres scrub-shrub, and 3.40 acres emergent and open water. Approximately 3.16 acres of the forested wetlands are considered of very high quality or of concern regionally and/or statewide (Category 3) and would be converted to shrub-scrub. TVA's practice is to mitigate for the loss of Category 3 forested wetlands at a 1:1 ratio as recommended by the 1990 Memorandum of Agreement between the United States Environmental Protection Agency and United States Army Corp of Engineers Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines. No mitigation is recommended for impacts to scrub-shrub or emergent wetlands, as these areas would be spanned by proposed transmission lines and would not be filled or converted to other wetland types. With mitigation, impacts resulting from the proposed project were determined to be insignificant.

The project area drains to Wheeler Reservoir on the Tennessee River via Swan Creek, Piney Creek, and Limestone Creek. The transmission line would cross perennial streams six times and would cross one pond, four intermittent streams, and seven wet-weather conveyances. Aquatic life is supported to varying degrees depending on the type of watercourses in the project area. Two federally listed aquatic snails are found within some perennial streams crossed, and a streamside management zone (SMZ) of 125 feet would be implemented in these areas. No other unusual aquatic communities are known from these watercourses. Swan Creek is on the state 303 (d) list as not supporting its designated uses due to siltation from nonirrigated crop production, urban runoff/storm sewers, and pasture grazing. Limestone Creek is on the 303 (d) list as not supporting its designated uses due to siltation from nonirrigated crop production and pasture grazing. BMPs and other streamside protection measures would be used to help ensure that the impacts of the transmission line construction, operation, and maintenance on area streams are minimized. With the implementation of these measures, impacts to streams, aquatic life, and water quality are expected to be insignificant.

Portions of the transmission line would be located in identified floodplains. Construction in these areas would not result in any increase in flood hazard, and the proposed action is consistent with the Executive Order on Floodplains. The project is compatible with current land uses, and the proposed action would not materially affect prime farmland. Impacts to recreation activities, transportation, and visual aesthetics would be insignificant. No parks, managed areas, or ecologically significant sites would be affected.

Six historic structures and three historic archaeological sites were identified during a survey of the project area. No intact archaeological deposits or features were identified during the investigations of the historic archaeological site, and a loss of integrity has occurred to the historic structures resulting from alterations and/or damage. These historic properties were determined to be ineligible for listing on the National Register of Historic Places.

### **Mitigation**

The siting process TVA used for the transmission line sought to avoid or limit potential environmental impacts where feasible. In addition to this effort, other mitigation measures have been identified during the review of the project. Many of these are standard measures that TVA routinely implements with all of its transmission line projects, such as the use of BMPs and other practices listed in the appendices of the Supplemental EA. These include the establishment of SMZs to protect against adverse impacts to water quality and aquatic resources. The following mitigation measures will be implemented to reduce the environmental impacts that could result from the proposed action:

### Protection of Aquatic Resources

- All intermittent and perennial watercourse crossings will be designated as either Category A, Standard Stream Protection, or Category C, Protection of Unique

Habitats, as outlined in Muncy (1999). Protection levels for each watercourse crossing are identified in Appendix VI of the Supplemental EA.

- Watercourses that convey only surface water during storm events (i.e., wet-weather conveyances or ephemeral streams) and that could be affected by the proposed transmission line route will be protected by standard BMPs as identified in Muncy (1999). These BMPs are designed to minimize erosion and subsequent sedimentation in streams.

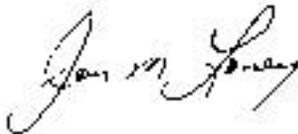
Wetland Mitigation

- Compensatory mitigation will be implemented for the approximately 3.16 acres of Category 3 forested wetlands that will be converted to shrub-scrub wetlands.

**Conclusion and Findings**

The Final Supplemental EA for this proposal concludes that construction and operation of the transmission line will not result in significant adverse impact upon the environment. This conclusion takes into account the implementation of the standard commitments such as the use of BMPs. It is also based on the implementation of the mitigation and avoidance measures mentioned above.

Environmental Policy and Planning's National Environmental Policy Act (NEPA) Administration staff reviewed the Final Supplemental EA, agreed with this conclusion, and determined that the preparation of an Environmental Impact Statement is not required.



*September 16, 2005*

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NEPA Administration  
Environmental Policy and Planning  
Tennessee Valley Authority

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Date Signed

**Reference**

- Muncy, J. A. 1999. A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Transmission Construction and Maintenance Activities (revised). Technical Note TVA/LR/NRM 92/1. Tennessee Valley Authority, Norris, Tennessee. Chris Austin, Chris Brewster, Alicia Lewis, Kenton Smithson, Tina Broyles, Tom Wojtalik, editors.
- Tennessee Valley Authority. 2003. Calpine's Morgan Energy Center – Provide Interconnection Environmental Assessment and Finding of No Significant Impact.

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