

FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
BURKESVILLE, KY 161-KILOVOLT TRANSMISSION LINE
CUMBERLAND COUNTY, KENTUCKY

Tri-County Electric Membership Corporation (TCEMC) serves the Burkesville, Kentucky area from their Burkesville 69-kilovolt (kV) Substation. Power is presently supplied to this substation by an 18-mile, single source 69-kV transmission line from the Dale Hollow Hydroplant (HP) 69-kV Switching Station, which is owned by the United States Army Corps of Engineers. Due to the long length and age of this transmission line, the voltage at the Burkesville Substation falls below acceptable TVA criteria during the winter months when the power demand (or “load”) is at its peak. Additionally, because electrical loads in the last few years have exceeded the winter capacity of the substation, reliability of the Burkesville 69-kV Substation is considered poor.

Both the substation and the transmission line that serve the substation were constructed in 1953 and are becoming inadequate to capably continue to serve the area. Due to the age and poor condition of these facilities, both need to be rebuilt in the near future.

To provide an adequate and reliable power supply to the Burkesville, Kentucky area, the Tennessee Valley Authority (TVA) proposes to supply power to an upgraded distributor substation by constructing and operating approximately 8.5 miles of new 161-kV transmission line. This substation, known as the Burkesville Substation, would be upgraded to 161-kV and operated by TCEMC, a local distributor of TVA power. TVA’s proposed 161-kV transmission line would connect TCEMC’s Burkesville Substation to TVA’s existing Wolf Creek Hydro HP-Summer Shade 161-kV Transmission Line. Construction of a new transmission line to the Burkesville 161-kV Substation would remedy the voltage problems and improve reliability in TCEMC’s Burkesville service area, thereby allowing TVA to meet industry wide standards established by the North American Electric Reliability Corporation and the National Electrical Safety Code.

The potential environmental effects of this proposed action are described in an environmental assessment (EA), which is incorporated by reference.

Alternatives

The subject EA evaluates two alternatives, i.e., the No Action Alternative and the Action Alternative (Construct and Operate a New 161-kV Transmission Line).

Under the No Action Alternative, TVA would not construct the proposed transmission line to serve TCEMC’s upgraded Burkesville 161-kV Substation. However, TCEMC could decide to build a new transmission line to provide power to the substation. The distributor could use the route identified by TVA, or it could select another route. Alternatively, TCEMC could decide not to upgrade the Burkesville Substation. In this event, current power reliability problems and the possibility of power outages would persist.

Under the Action Alternative, TVA would serve TCEMC’s upgraded Burkesville 161-kV Substation by building an 8.5-mile-long 161-kV transmission line connecting the substation to

TVA's existing Wolf Creek HP-Summer Shade 161-kV Transmission Line. The new transmission line would be located on new 100-foot-wide right-of-way (ROW). Several access roads and a construction laydown area of approximately 4-acres would be required for the construction and maintenance of the proposed transmission line.

Additionally, TVA would provide metering equipment to the distributor for installation at the new Burkesville Substation. TCEMC would retire the existing 13-kV capacitor banks and metering package at their existing 69-kV substation and TVA would dispose of this equipment. TVA system's map board display at TVA's System Operations Center and Regional Operations Center in Chattanooga would be modified to include indicators of the operational status of the new facilities.

Impacts Assessment

The EA documents potential effects to the following resources: land use; vegetation; wildlife; aquatic life; endangered and threatened species (plants, terrestrial animals, and aquatic animals); water quality; wetlands; floodplains; archaeological and historic resources; aesthetic resources; recreation, parks, and natural areas; and socioeconomics and environmental justice.

If the No Action Alternative were adopted, TVA would not construct or operate a new 161-kV transmission line to serve TCEMC's planned upgraded Burkesville 161-kV Substation. Thus, environmental conditions along the proposed ROW would remain unchanged. However, if TCEMC were to independently provide transmission service by constructing a new transmission line, the potential environmental effects of implementing the No Action Alternative would be comparable to those resulting from the adoption of the Action Alternative, depending on factors such as the route chosen for the transmission line and the construction methods. In the event that TCEMC chose not to upgrade the Burkesville 69-kV Substation, the reliability of the local power supply would continue to degrade, and the area could lose residential, commercial, and industrial development opportunities. Potential socioeconomic effects under the No Action Alternative would likely affect all populations in the region negatively.

Most of the ROW for the proposed transmission line is either farmland or forest. Agricultural land use is consistent with transmission line operations. Under the Action Alternative, approximately 85 acres of forested land within the proposed ROW would be cleared. The construction of the proposed transmission line would change the ROW from forest to early successional habitats; however, potential effects to vegetation, local wildlife populations and habitats, and aquatic life would be minor and insignificant.

In order to minimize impacts to potential summer roosting habitat for the Indiana bat, TVA would enter into a Memorandum of Agreement (MOA) with the United States Fish and Wildlife Service (USFWS) and implement mitigation measures on the timing of timber harvesting. With implementation of these mitigation measures, impacts on federally listed endangered or threatened species would not be adverse. Fulfilling the terms of the MOA will satisfy TVA's obligations under Section 7 of the Endangered Species Act.

One of the two state-listed butternut trees in the project area would be negatively affected. One small population of state-listed Carolina anglepod would be adversely affected by access road construction; however, direct impacts would be minimized through the use of conservation measures during construction and maintenance. Overall impacts to state-listed species would be insignificant.

With the use of appropriate best management practices, potential effects to surface water, groundwater, and wetlands would be minor and insignificant. Although the proposed transmission line would cross floodplain areas, placement of support structures for the power line within the 100-year floodplain is considered a repetitive action and is not expected to cause any increase in flood hazard due to changes in flood elevations or in the flow-carrying capacity of the streams being crossed. Two access roads would cross 100-year floodplain areas. These roads would be constructed in a manner that would avoid increases in upstream flood elevations (see Mitigation section below). Impacts to wetlands and floodplains would be minimized consistent with the requirements of EO 11988 and EO 11990 respectively.

The proposed transmission lines would have a visual effect on one historic structure listed on the National Register of Historic Places (NRHP) and six structures that are eligible for inclusion on the NRHP. However, the effect would not be adverse due to the naturally mitigating effects of distance and vegetation. The proposed project would have no effect on any archaeological resources eligible for the NRHP. The Kentucky State Historic Preservation Officer (KYSHPO) has concurred with TVA's determination of these effects in letters dated August 16, 2011, October 24, 2011, January 11, 2012, February 23, 2012, and February 28, 2012. Accordingly, TVA's obligations under Section 106 of the NHPA for the construction of the proposed transmission line and access roads have been met.

Most changes in local visual character would occur during transmission line construction. The visual presence of the new transmission line would not contrast significantly with the established landscape character. Construction and operation of the proposed transmission line could cause minor shifts in local informal recreation. The proposed transmission line would be located within 0.3 mile of the Cumberland River, listed on the Nationwide Rivers Inventory (NRI). This NRI-listed stream would not be affected because of the distance and implementation of BMPs. No natural areas or Wild and Scenic Rivers would be affected. No natural areas or designated Wild and Scenic Rivers occur within 3 miles of the proposed action, and no effects to these resources are expected.

The socioeconomic effects caused by inadequate power supplies would be prevented under the Action Alternative. Minor temporary effects could be experienced during transmission line construction; however, no noticeable adverse social or economic effects, including changes in local property values, are likely.

Public and Intergovernmental Review

TVA posted information about the project, including a map of alternative routes and feedback mechanisms, on its Web site. Public officials were briefed on the project. Potentially affected property owners, along with seven public officials, were invited to a project open house, which was held on August 26, 2010, in Burkesville, Kentucky. TVA used local news outlets and placed notices in the local newspapers to notify the public of the meeting, which was attended by 51 people.

At the open house, TVA presented a network of 10 alternative transmission line routes comprised of 13 different line segments and three tap points and other issues. A 30-day public review and comment period was held following the open house, and TVA accepted public comments on the proposed action.

TVA consulted with the USFWS, the Kentucky Heritage Council, and 11 federally recognized Native American tribes concerning the proposed project.

Mitigation

TVA will implement the standard procedures listed in Appendices B through E in the EA for reducing adverse environmental effects from the construction, operation, and maintenance of the proposed transmission line and switch structures.

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

1. A state-listed endangered plant, Carolina anglepod, occurs in the project area. In order to minimize impacts to this plant along the ROW and access roads, the following measures will be implemented where this species was identified:
 - Clearing of woody vegetation in these areas would be accomplished with a feller-buncher.
 - Heavy equipment would not be used during construction to re-contour, remove tree stumps, or otherwise intentionally disturb the soil profile in these areas.
 - TVA would not use aerial application of herbicides in these areas; instead, mowing or selective spraying of herbicides would be used to control woody vegetation.
2. Potential Indiana bat summer roosting habitat occurs in the project area. In order to minimize adverse effects to the Indiana bat, the following measures, identified in the MOA, would be implemented:
 - To prevent direct impacts to Indiana bats during operations and maintenance activities, any removal of trees located within or adjacent to the proposed ROW along the identified 10-mile area of documented Indiana bat occurrence would be seasonally restricted to occur between October 15 and March 31. Should it be necessary to remove trees outside of this period, appropriate biological staff would conduct field surveys to ensure that the trees did not provide potential habitat for the Indiana bat, indicating their possible presence and, if needed, to coordinate with the USFWS to determine if modifications to the MOA would be required.
 - TVA would pay \$100,050 to the Indiana Bat Conservation Fund to compensate for impacts to potentially suitable summer roosting Indiana bat habitat.

Conclusion and Findings

Based on the findings in the EA, TVA concludes that the construction of the proposed 161-kV transmission line and switch structures as described under the Action Alternative will not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required. This finding is contingent upon adherence to the mitigation measures described above.



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Date Signed