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REVISED FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY

U.S. ARMY GARRISON - FORT CAMPBELL

OAKWOOD SWITCHING STATION AND MONTGOMERY-OAKWOOD SWITCHING STATION TRANSMISSION LINE, MONTGOMERY COUNTY, TENNESSEE

The Proposed Action

The Tennessee Valley Authority (TVA) proposes to construct a new 161-kilovolt (kV) switching station and the associated transmission line connection in Montgomery County, Tennessee. The new switching station would be located on a 6-acre site at the intersection of TVA's existing Montgomery-Barkley 161-kV Transmission Line and its 161-kV tap line to TVA's Screaming Eagles 161-kV Substation. The proposed transmission line would connect the Screaming Eagles Substation with TVA's Montgomery 500-kV Substation. The new transmission line would be approximately 13 miles long and constructed with a combination of steel single-pole and H-frame structures. It would occupy a right-of-way (ROW) with a width of 100 feet and an area of approximately 158 acres. TVA would also install a new bay and circuit breaker within the existing fenced area of the Montgomery Substation and make modifications to relay and communications equipment at the Barkley Hydro Plant Switchyard and its Dover, Jersey Miniere, Van Leer and South Nashville Substations. TVA has prepared an Environmental Assessment (EA) that is incorporated by reference.

A portion of the proposed transmission line would be located on Fort Campbell, and the U.S. Army proposes to issue a right of entry and long-term lease to TVA for the construction and operation of this section of the line. The U.S. Army has cooperated with TVA in the preparation of the EA.

Background

The purpose of the proposed action is to increase the reliability of TVA's electrical service to western Montgomery County, the U.S. Army's Fort Campbell, and the Dover area of Stewart County, Tennessee. These areas are presently supplied by four substations connected to the Montgomery-Barkley Transmission Line. Because of the long distance from the Barkley Hydro Plant, an outage on the eastern portion of the line would result in low voltage and a blackout of the four substations and an overload on the Barkley-Dover Transmission Line. Growing electrical loads in the area contribute to the problem. The proposed action would provide a second direct connection to the strong power source at the Montgomery Substation and thus provide voltage support to the area. It would also provide a source of backup power to the area.

Alternatives

While planning this project, TVA considered various means of improving the power supply to western Montgomery County, the U.S. Army's Fort Campbell, and the Dover area of Stewart County, Tennessee. In addition to the proposed action (the Preferred Alternative) and the No Action Alternative, TVA considered other potential alternatives including: 1) constructing the Oakwood Switching Station and a new 15-mile transmission line connecting it to the Clarksville

161-kV Substation and installing a static var compensator or second 500/161-kV transformer bank at Montgomery Substation; 2) constructing the Oakwood Switching Station and install static var compensators at the Screaming Eagles Substation; 3) constructing the Oakwood Switching Station and installing five capacitor banks in the switching station; and 4) constructing an Oakwood 500-kV Substation and a 500-kV transmission line loop connection to the new Cumberland-Montgomery 500-kV transmission line. All four of these potential alternatives were eliminated from further consideration because they cost substantially more than the Preferred Alternative, would result in a higher level of impacts than the Preferred Alternative, and/or they did not result in a long-term solution to the problem.

The Preferred Alternative is analyzed in detail in the EA.

Impacts Assessment

The potentially affected area is a mixture of old fields, farmlands, wooded riparian areas, and rapidly developing suburban areas. About 6 acres of land would be required for the switching station and the transmission line would occupy about 158 acres of ROW.

The EA concludes that the impacts to vegetation and wildlife would be insignificant. About a quarter of the proposed ROW is forested and this forest is heavily fragmented. TVA has also made changes to the originally proposed transmission line route to reduce impacts to forested riparian areas and reduce the impacts from fragmentation. No unusual plant or animal communities are present. Although two federally listed endangered species, the gray bat and Indiana bat, are known to occur in the project area, no impacts to gray bats are expected. Some forested riparian habitat suitable for use by roosting Indiana bats would be affected by ROW clearing. In accordance with Fort Campbell's endangered species management plan and U.S. Fish and Wildlife Service recommendations, this ROW clearing would occur between September 16 and March 31. With implementation of this commitment, no effects on Indiana bats are anticipated. No adverse impacts to state-listed endangered and threatened species in the project area are anticipated.

The proposed action would not affect jurisdictional wetlands. The clearing of the transmission line ROW would affect 11.2 acres of nonjurisdictional wetlands at several locations along project area creeks. The main impact to these wetlands would be the removal of trees. TVA attempted to minimize these impacts during the transmission line routing process and subsequently changed a section of the proposed route near Fletcher Fork. Impacts to wetlands would be insignificant.

The proposed transmission line would have several stream crossings. With the use of standard best management practices (BMPs) and streamside management zones, impacts to aquatic life and water quality, including groundwater, would be insignificant. The proposed switching station is not in a floodplain. Portions of the proposed transmission line would be within the 100-year floodplain. TVA has determined that there is no practical alternative to siting these the transmission line in the floodplain and no increase in flood hazard would result.

The proposed switching station is compatible with current land uses. About 1.2 miles of the proposed transmission line would be built on Fort Campbell. This portion of the line would cross an area presently used as a scout campground and a camping pavilion and would have to be relocated outside the proposed ROW. TVA has committed to working with Fort Campbell staff to relocate this facility. Aircraft warning spheres would also be install on the portion of the line on Fort Campbell to reduce the potential hazard to base aircraft operations. With implementation of these measures, the proposed transmission line is compatible with the Fort Campbell mission. Impacts to land use, recreation, parks, and managed areas from other portions of the project would be insignificant. The construction of the switching station and

portions of the project would be insignificant. The construction of the switching station and transmission line would result in visual impacts. These impacts would be greatest at the switching station and TVA would reduce its visual impacts by a vegetative screen around the station, minimizing lighting, and using dark-sky lighting techniques.

No historic or archaeological sites eligible for listing on the National Register of Historic Places would be affected and impacts to cultural resources would be insignificant. The Tennessee State Historic Preservation Officer has concurred with this determination.

Mitigation

The siting process TVA used for the proposed switching station and transmission line sought to avoid or limit potential environmental impacts. In addition to this effort, TVA would use standard measures such as the use of BMPs, maintenance of streamside management zones, and other practices listed in the appendixes of the EA to minimize impacts. The following mitigation measures will be implemented to reduce the environmental impacts that could result from the proposed action:

Protection of Recreation Resources

- TVA will work with Fort Campbell staff to remove the Boy Scout camping pavilion near Fletcher Fork and rebuild it in a suitable location.

Protection of Visual Resources

- TVA will plant a vegetative screen of mixed deciduous and evergreen shrub species, 10 foot minimum width, around all sides of the new switching station. Shrubs should have a mature height of 10-12 feet, and be 4.5 - 5 feet tall when planted, with a maximum spacing of five feet. Shrubs should not be planted within 20 feet of gates.

Conclusion and Findings

The Final EA for this proposal concludes that construction and operation of the substation and transmission line, as well as associated minor work at other TVA facilities 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.

TVA's Environmental Stewardship and Policy's National Environmental Policy Act (NEPA) Policy staff and U.S. Army - Fort Campbell staff have reviewed the Final EA, agreed with this conclusion, and determined that the preparation of an Environmental Impact Statement is not required.

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February 20, 2007
Date Signed

Jeffrey J. Schloesser
MG, U.S. Army
Commanding

Date Signed