

REVISED
FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
RED HILLS-KOSCIUSKO 161-KV TRANSMISSION LINE

Central Electric Power Association (Central EPA) plans to upgrade its existing Kosciusko 46-kilovolt (kV) Substation in Kosciusko, Mississippi, to a 161-kV substation. The Tennessee Valley Authority (TVA) proposes to supply electric power to this substation by constructing and operating approximately 43 miles of new 161-kV transmission line (TL), which would connect the planned substation to TVA's existing Red Hills 161-kV Substation in Ackerman, Mississippi. The proposed project would require approximately 524 acres of right-of-way (ROW), including about 461 acres of new ROW and 63 acres of existing ROW.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The National Park Service (NPS) is a cooperating agency on the EA. The EA is incorporated by reference.

Alternatives

The subject EA evaluates two alternatives in detail, *i.e.*, the No Action Alternative and the Action Alternative (TVA Provides an Additional Power Supply to the Central EPA Service Area). TVA also considered other alternatives, including alternative TL routes, in identifying its preferred action alternative.

Under the No Action Alternative, TVA would not provide a 161-kV power supply to serve the Kosciusko areas of Choctaw, Attala, and Winston Counties. If the project were cancelled, no direct environmental effects are anticipated, as environmental conditions along the ROW that TVA proposes to acquire would remain essentially unchanged from current conditions. The Central EPA service area would continue to operate under current conditions, increasing the risk for substation and TL overloading, loss of service, and occurrence of violations of North American Electric Reliability Corporation criteria. TVA's ability to continue to provide reliable service to address economic development and anticipated residential and commercial growth in the area would not be improved.

Under the Action Alternative, TVA would serve Central EPA's planned Kosciusko 161-kV Substation by building a 43-mile long 161-kV TL connecting the planned substation to TVA's existing Red Hills 161-kV Substation. The new TL would utilize about 5.2 miles of the existing ROW and 38 miles of new 100-foot-wide ROW. TVA would provide the standard revenue metering package for Central EPA to install in their new substation. The TL would be built using single and double steel-pole structures. Temporary access roads would be required for construction and maintenance of the proposed TL.

Additionally, TVA would install new fiber-optic ground wire on the new TL to facilitate communications with the TVA network. The TVA map board displays would be updated to reflect the new facilities.

The EA addresses the construction, operation, and ROW maintenance of the proposed TL.

Impacts Assessment

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

If the No Action Alternative were adopted, a decline in the reliability of electric service for some customers would be likely in the future. Service problems and interruptions likely would gradually become more frequent and more severe. These outages would have negative impacts on the ability of businesses in the area to operate. Residents of the area would also incur negative impacts from outages, such as more frequent loss of power. These conditions would clearly diminish the quality of life for residents in the area and would likely have negative impacts on property values in the area. Potential socioeconomic effects under the No Action Alternative would likely affect all populations in the region negatively.

Based on our analysis of the proposed Action Alternative, there would be no effects to geological characteristics. Potential effects from electromagnetic fields would be minor, and the proposed TL 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. Potential effects from noise would be temporary and insignificant. Construction, operation, and maintenance of the proposed TL could cause minor shifts in local informal recreation.

Overall, the Action Alternative would have no disproportionate impacts to disadvantaged populations. Providing an additional source of power would help maintain reliable service in the area, thereby avoiding the potential increase in negative impacts from lack of reliability. No noticeable adverse social or economic effects, including changes in local property values, are likely. Potential effects on traffic would likely be minor and short-term in nature.

Because appropriate best management practices (BMP) would be implemented during construction, operation, and maintenance of the proposed TL, 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. The proposed TL would cross floodplain areas of several streams. Consistent with Executive Order (EO) 11988 (Protection of Floodplains), overhead TLs and related support structures are considered to be repetitive actions in the 100-year floodplain. Portions of some access roads would be located within 100-year floodplains. To minimize adverse impacts, any road construction or improvements would be done in such a manner that upstream flood elevations would not be increased. To minimize adverse impacts on natural and beneficial floodplain values, TVA would implement standard BMPs during construction and adhere to the TVA subclass review criteria for TL location in floodplains. As such, construction, operation, and maintenance of the proposed TL would have no significant impact on floodplains.

Construction of the proposed TL would require changes in land use from forest to early successional habitats. The clearing of approximately 391 acres of forest would constitute a minor loss of forest resources at the local level. 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. ROW clearing and maintenance would displace various wildlife species, but would not adversely affect local populations.

Implementing the proposed Action Alternative would not impact federally listed plant species, aquatic species or designated critical habitat because none occur in the project area. However, the adoption of the Action Alternative could negatively impact five occurrences of the state-listed Turk's cap lily. Given the total number of records of the species, and the relatively wide distribution across the state, TVA determined the potential loss of the five occurrences would not significantly affect the species. Despite the potential for negative impacts, clearing of forest for the proposed ROW on sites where the Turk's cap lily occurs may serve to enhance habitat for the species by providing the additional sunlight required for flowering and seed set. Currently, all occurrences of the species observed in the proposed ROW are in heavily shaded situations and would not flower. Therefore, the proposed action may also have some beneficial effect on the plant.

The federally listed red-cockaded woodpecker has been documented within Choctaw and Winston counties. No red-cockaded woodpeckers were observed during field surveys and the project footprint lacks suitable red-cockaded woodpecker nesting and foraging habitat. Therefore, red-cockaded woodpeckers would not be impacted by the proposed project activities. The federally listed wood stork has the potential for the species to occur in the project footprint. Wood storks do not breed in Mississippi; however, vagrant individuals are believed to occur statewide. No wood storks were observed during field surveys. The project footprint contains suitable wood stork foraging habitat within an existing TL ROW and roosting habitat within the proposed ROW. The proposed project may clear potential roosting habitat and increase foraging habitat. Wood storks are rare in the region and are not likely to be impacted by the proposed action.

Approximately 72.8 acres of suitable summer roosting habitat for the federally listed northern long-eared bat occurs in the proposed ROW corridor. To avoid potential impacts to the northern long-eared bat, any tree removal in areas determined to provide suitable summer roosting habitat for the northern long-eared bats would occur between August 1 and May 31. With implementation of this voluntary conservation measure to avoid and minimize impacts, the proposed action would result in no adverse effects to any species federally listed as threatened or endangered. In a December 1, 2016 and January 12, 2017 letter, the U.S. Fish and Wildlife Service (USFWS) concurred with TVA's findings that the proposed project may affect the northern long-eared bat, but that the proposed action would not result in prohibited incidental takes pursuant to the final 4(d) rule. Thus, TVA's obligations under Section 7(a)(2) of the ESA have been fulfilled for this project.

In compliance with EO 11990 (Protection of Wetlands), TVA has determined that there is no practicable alternative route that would completely avoid all wetland impacts. A total of 70.58 acres of wetlands would be spanned by the proposed TL. Of this, 44.49 acres are forested wetlands requiring clearing within the ROW and habitat conversion to emergent and shrub-scrub wetlands. Similarly, all spanned wetlands within the proposed TL ROW would be then subject to periodic vegetation management for the life of the TL. All of the delineated forested wetland areas encountered within the ROW are located adjacent, connected, or within a larger wetland complex extending outside the ROW. Therefore, although the functional capacity of converted forested wetland area within the ROW would diminish, naturalized lower stature vegetation would persist, and the wetland basins at-large would remain intact and continue providing valuable wetland functions to the landscape. In addition, neither TL structures nor conductors would interfere with the hydrologic flow or inundation regimes. The affected forested wetlands' functions and values would be provided at the level typical of emergent and shrub-scrub habitat in the same landscape setting, while the unaffected wetland area outside the ROW sustains existing functions within the larger wetland complex.

Under the Clean Water Act (CWA), the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers (USACE) are tasked to ensure maintenance of the chemical, physical, and biological integrity of the nation's waters, including wetlands. TVA would comply with all CWA wetland regulatory requirements to ensure the proposed forested wetland conversion results in less than minimal, adverse impacts to the aquatic environment and the objective of the CWA is met. TVA would also use a variety of techniques and BMPs to minimize wetland disturbance during construction. These can include using a feller-buncher, low ground-pressure equipment and/or mats to reduce soil compaction and minimize rutting to less than 12 inches for any and all work necessary within the delineated wetland boundaries. They also can include limiting heavy vehicular equipment to narrowed access corridors along the ROW for structure and conductor placement.

These measures would ensure that adverse impacts would be minimal. However, because the project area is in a watershed basin rich in wetlands with roughly 10 percent of the area comprising forested wetlands and because these wetlands are dispersed throughout the area, avoiding wetlands entirely along the route is virtually impossible. TVA considered 110 routes in its environmental review. The preferred route has the best overall environmental ranking. After balancing all project constraints including schedule, cost, engineering feasibility, environmental resources, and disruptions to landowners whose lands would be traversed by the route, TVA determined the preferred alternative avoids impacts to wetlands to the extent practicable. In compliance with EO 11990 (Protection of Wetlands), TVA finds there is no practicable alternative to the wetland impacts described above.

TVA is conducting its Section 106 compliance with a phased process for assessing effects, as provided in 36 CFR § 800.5(a)(3) of the regulations of the Advisory Council on Historic Preservation. In using the phased approach, TVA and the State Historic Preservation Officer (SHPO) are considering the project in two phases: 1) the approximate 42.6-mile section of proposed TL located outside of the Natchez Trace Parkway boundary, and 2) the approximate 0.387-mile section of TL that crosses the Parkway boundary and lies within NPS land (described below). TVA is continuing to assess the undertaking's potential effects on historic properties in both project phases, but may proceed with these assessments for each phase on different schedules.

Regarding the phase of the project outside the Natchez Trace Parkway boundary, the proposed action has the potential to result in adverse effects to three archaeological sites (22At571, 22Ch875, and 22Ch877) that are potentially eligible for listing on the National Register of Historic Places (NRHP). Vehicles to be used in TL construction would pass over all the sites and vegetation clearing would be required within the boundaries of sites 22Ch875 and 22Ch877, which could result in compaction and ground disturbance. To avoid potential adverse impacts to all three sites from compaction and possible ground disturbance that may occur during construction and vegetation clearing, TVA will create a 30-meter buffer surrounding each site, and will place wetland mats within the buffers during construction and vegetation clearing at all three locations.

Cumulative effects to these sites could occur in the future resulting from the operation and maintenance of the TL. Operation and maintenance would require periodic inspections, vegetation maintenance (mowing, or apply herbicide, or trimming woody vegetation), and occasional replacement of components of the TL structures, conductor, and overhead ground wire. The types of equipment that TVA uses in operation and maintenance are similar or identical to those used during construction. To avoid the possibility of effects from use of equipment, TVA would mark the locations of the sites' 30-meter buffers on all drawings

associated with the TL, and would place conditions on all future operation and maintenance activities at the site locations. The conditions would state that the operation/maintenance activities would be conducted during times of dry and firm ground, or by using low-ground-pressure equipment, or with wetland mats placed within the site buffers. No drilling, auguring, excavation, or grubbing would be allowed within the site buffers without additional review by TVA staff and, if TVA deems necessary, the SHPO and tribes. TVA finds that, with the above measures in place, the undertaking would not result in adverse effects to any NRHP-eligible archaeological site. The SHPO agreed with these findings by letter dated December 8, 2016.

With the exception of impacts to the Natchez Trace Parkway (described below), overall operation, construction, and maintenance of the proposed TL would cause minor visual effects. There may be some minor cumulative visual discord during the construction period due to an increase in personnel and equipment and the use of laydown and materials storage areas. These minor visual obtrusions would be temporary until the ROW and laydown areas have been restored through the use of TVA standard BMPs. Therefore, any direct, indirect, or cumulative visual impacts anticipated as a result of implementing this project would be minor.

Natchez Trace Parkway Crossing

There would be 0.387-mile segment of the proposed TL (3.26 acres of ROW) crossing a portion of the Natchez Trace Parkway. This crossing would be accomplished by offsetting the new TVA centerline west of the existing Central EPA 46-kV centerline. The existing 46-kV Central EPA TL would be retired and re-built as underbuild on the new TVA double-circuit TL. Only the section east and west of the Natchez Trace Parkway would be retired/re-built as an underbuild. Vegetation within the retired section of Central EPA ROW would then be allowed for regrowth.

The proposed crossing would add a small number of contrasting elements, but would be similar to the landscape as described in Section 4.2.11. With impacts to the Natchez Trace Parkway mitigated, overall operation, construction, and maintenance of the proposed TL would cause minor visual effects. There may be some minor cumulative visual discord during the construction period due to an increase in personnel and equipment and the use of laydown and materials storage areas. These minor visual obtrusions would be temporary until the ROW and laydown areas have been restored through the use of TVA standard BMPs. Therefore, any direct, indirect, or cumulative visual impacts anticipated as a result of implementing this project would be minor.

TVA's proposal would require clearing of about one acre of forested wetland within the NPS Natchez Trace Parkway boundary and would include nominal fill (less than 0.1 acre) from the installation of one structure. This wetland area would continue to be maintained and function as a shrub-scrub/emergent wetland. Following construction of the proposed TL, 0.66 acres of scrub-shrub/emergent wetland within Central EPA's existing 46-kV ROW would then be allowed to revert to forested growth patterns. As a part of the NPS NEPA Decision Document, NPS-impacted wetlands would be further analyzed in a Wetlands Statement of Findings which would also document any mitigation measures, and be open to the public for a 30-day review period along with the NPS NEPA document.

Prior to construction, consultation with the SHPO will be completed and TVA would enter into a General Agreement with NPS for the portion of the TL that would cross the Natchez Trace Parkway. The General Agreement will outline any mitigation requirements necessary to avoid or minimize adverse effects to the NRHP-eligible Natchez Trace Parkway. This information and any subsequent mitigation measures would then be incorporated into a Memorandum of Agreement (MOA) between the TVA, NPS, SHPO, and tribes and would be included by

reference in the NPS NEPA Decision Document. TVA finds that, with these measures in place, the undertaking would not result in adverse effects to the NRHP-eligible Natchez Trace Parkway.

Public and Intergovernmental Review

TVA developed a public communication plan that included a website with information about the project, a map of the alternative routes, and feedback mechanisms. Due to the large number of alternative routes and property owners potentially affected by the proposed project, TVA held two open houses in Mississippi. Public officials were briefed on the project. Property owners who could potentially be affected by any of the route alternatives, along with public officials, were invited to the project open houses. TVA used local news outlets and notices placed in the local newspapers to notify other interested members of the public of the open houses.

At the open houses, TVA presented a network of alternative TL routes, comprised of 41 different line segments, to the public for comment. A 30-day public review and comment period was held following the open houses, and TVA accepted public comments on the proposed project.

TVA also released a draft EA for public comment on its website. TVA used local news outlets and placed notices in the local newspapers to notify other interested members of the public. During this review period, TVA also coordinated the EA with the Mississippi Department of Environmental Quality (MDEQ), USFWS, USACE, and NPS. TVA received comments from consultation parties (NPS, SHPO, federally recognized tribes, and USACE), but no others. Additionally, the National Historic Preservation Act Section 106 review for impacts to historic properties was coordinated with the Mississippi state SHPO and tribes.

Mitigation

TVA will implement, or require adherence to, the routine measures listed in the EA during construction, operation, and maintenance of the proposed TL and associated access roads. In addition, the following non-routine measures will be applied during construction and operation of the proposed TL to reduce the potential for adverse environmental effects.

- Portions of the proposed ROW are located within state-designated source water protection areas for public water supply. Therefore, herbicides with groundwater contamination warnings will not be used during clearing, revegetation, and maintenance activities.
- Improper use of herbicides to control vegetation could result in runoff to streams and subsequent aquatic impacts. Therefore, any pesticide/herbicide use as part of construction or maintenance activities will comply with the MDEQ general permit for application of pesticides, which also requires a pesticide discharge management plan. In areas requiring chemical treatment, only U.S. Environmental Protection Agency-registered and TVA approved herbicides will be used in accordance with label directions designed in part to restrict applications near receiving waters and to prevent unacceptable aquatic impacts.
- TVA has determined that archaeological sites 22At571, 22Ch875, and 22Ch877 would be impacted from compaction and possible ground disturbance under the proposed action. TVA is proposing the following mitigation measures pending Mississippi SHPO agreement.

- To avoid potential adverse impacts, TVA proposes to create a 30-meter buffer surrounding each site and place wetland mats within the buffers during construction and vegetation clearing at all three locations.
- To avoid potential cumulative effects, TVA proposes to mark the locations of the sites' 30-meter buffers on all drawings associated with the TL, and place conditions on all future operation and maintenance activities at the site locations. The conditions would state that the operation/maintenance activities would be conducted during times of dry and firm ground, or by using low-ground-pressure equipment, or with mats placed within the site buffers. No drilling, auguring, excavation, or grubbing would be allowed within the site buffers without additional review by TVA staff and, if TVA deems necessary, the SHPO and tribes.
- A General Agreement will be developed between TVA and the NPS prior to the NPS completing their NEPA Decision Document for the TL ROW crossing and construction permit. This document would outline any mitigation requirements necessary to address cultural, visual, or wetland impacts within the Natchez Trace Parkway. This would include TVA continuing to consult with the SHPO, federally recognized tribes, and the NPS to explore alternatives for the proposed undertaking that would avoid or minimize adverse effects to the NRHP-eligible Natchez Trace Parkway.
- Any tree removal in areas determined to provide suitable summer roosting habitat for the northern long-eared bats will occur between the dates of August 1 through May 31.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of constructing a 43-mile long 161-kV TL to supply power to the planned substation to TVA's existing Red Hills 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.



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Date Signed