

FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

RUGBY-SUNBRIGHT POWER SUPPLY IMPROVEMENTS

Plateau Electric Cooperative (Plateau EC), a local power company and distributor of Tennessee Valley Authority (TVA) power, has requested a new power source to improve reliability within the Sunbright, Tennessee service area. TVA proposes to improve reliability of the existing power supply system within the Plateau EC's service area by constructing and operating a new 161-kilovolt (kV) Substation and 7.5-mile 69-kV transmission line (TL). The proposed substation would be located at a tap point south of TVA's existing Livingston-Huntsville 161-kV TL. The TL would originate at TVA's existing Livingston-Huntsville 161-kV TL on the east side of Brewstertown Road in Rugby, Tennessee, and would tie into the proposed Rugby Substation. From the Rugby Substation, a new 69-kV TL would extend southeast and terminate at the Plateau EC's existing Sunbright 69-kV Substation. The proposed substation and TL would occupy approximately 103 acres.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The EA is incorporated by reference. The EA addresses the construction, operation, and maintenance of the proposed TL and substation.

Alternatives

Two alternatives (the No Action Alternative and the Action Alternative) were addressed in the EA. TVA also considered other alternatives, including alternative TL routes, in identifying its preferred action alternative.

Under the No Action Alternative, TVA would not construct the proposed substation and TL. If the project were cancelled, no direct environmental effects are anticipated, as environmental conditions along the right-of-way (ROW) that TVA proposes to acquire would remain essentially unchanged from current conditions. The TVA power system in the Sunbright service area would continue to operate under current conditions, increasing the risk of substation and TL overloading, loss of service, and occurrence of violations of TVA's reliability criteria. TVA's ability to continue to provide reliable service to address economic development and future residential and commercial growth in the area would be jeopardized.

The Action Alternative involves the construction, operation, and maintenance of a new 161-kV substation and a 7.5-mile 69-kV TL. The proposed substation would occupy approximately 10 acres and would connect to TVA's existing Livingston-Huntsville 161-kV TL to serve as a tap point to provide a 69-kV electric power feed to the existing Sunbright Substation. The TL would be built using single-steel pole structures centered on new 100-foot-wide ROW. Additionally, TVA would modify communications equipment and add electrical equipment at the existing Huntsville, Monroe, New Jamestown, and Livingston, Tennessee substations. TVA would install line switches for TL protection. The TVA map board displays would be updated to reflect the new facilities. The Action Alternative is TVA's preferred alternative.

Impacts Assessment

The EA documents potential effects to the following resources: 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.

Under 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 TL and substation 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. Potential effects on traffic would likely be minor and short-term in nature. Potential effects to local visual quality would be minor. Construction, operation, and maintenance of the proposed TL and substation 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.

Because appropriate best management practices (BMPs) and permit requirements would be implemented during construction, operation, and maintenance of the proposed TL and substation, 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. The conducting wires of the TL would be located well above the 100-year flood elevation. The proposed substation and the permanent access road to the substation would be located outside 100-year floodplains. Portions of some temporary access roads would be located within 100-year floodplains. 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 (46 Federal Register 22845). As such, construction, operation, and maintenance of the proposed TL and substation would have no significant impact on floodplains.

Construction of the proposed TL would result in the clearing of approximately 76 acres of forest. The plant communities found within the project area are common and well represented throughout the region. Converting forested land to managed ROW would be long-term in duration, but insignificant, because 76 acres represents a small percentage of forest resources in the region. 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.

No habitat for federally or state-listed plant species occurs along the proposed ROW, access roads and substation site; therefore, no impacts on listed plants are anticipated under the Action Alternative. TVA has determined that the proposed project would have no effect on the federally listed blackside dace, Alabama lampmussel, finereyed pigtoe, laurel dace, purple bean, shiny pigtoe, spotfin chub, Cumberland bean, or turgid blossom pearlymussel. With the implementation of appropriate BMPs and application of an enhanced protective streamside management zone buffer for White Oak Creek, direct impacts to in-stream habitat which support the Cumberland elktote would be non-existent. Based on the minor extent of potential in-stream effects associated with this project, TVA has determined that the proposed Action Alternative is not likely to adversely affect the federally listed as endangered Cumberland elktote. Because no in-stream modification or impacts to water quality would occur, TVA has determined that there would be no adverse modification of designated critical habitat for the federally listed Cumberlandian combshell, Cumberland elktote, or oyster mussel. In a January 27, 2017 letter, the USFWS concurred with TVA's determinations.

Habitat for the state-listed Allegheny woodrat does not exist within the project footprint; therefore, Allegheny woodrat would not be impacted by the proposed actions. No nesting records of the Swainson's warbler are known to occur in East Tennessee; therefore, direct impacts to individuals are not expected to occur as all individuals would be mobile during construction activities and could vacate the premises if disturbed. Loss of existing habitat would temporarily displace individuals currently using these areas. Upon completion of the project activities, non-woody vegetation would be allowed to regrow within the ROW. This habitat may offer marginally suitable habitat; therefore, the proposed Action Alternative is not expected to affect Swainson's warbler. Suitable habitat for smoky shrew and woodland jumping mouse exists in the project area. With implementation of BMPs around wetlands and water bodies the proposed Action Alternative is not expected to affect these species.

Approximately 67 acres of suitable summer roosting habitat for the federally listed northern long-eared bat and Indiana bat would be removed under the proposed Action Alternative. To remove any potential direct effects to roosting northern long-eared bat and Indiana bat, TVA will clear trees in these areas of potentially suitable summer roosting habitat between October 15 and March 31. In order to mitigate indirect impacts to Indiana bat resulting from removal of suitable summer roost habitat, TVA proposes to partner with the TWRA to promote recovery of the Indiana bat. TVA would enter into an agreement with TWRA wherein TVA would contribute \$200,000 to TWRA for the protection, enhancement, and monitoring of known, currently unprotected, Indiana bat maternity habitat in Tennessee. In a January 27, 2017 letter, the USFWS agreed that the proposed agreement would be an appropriate method of mitigating for long-term Indiana bat habitat losses as an alternative to payment into Tennessee's Imperiled Bat Conservation Fund. USFWS also 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.

The proposed project would require the conversion of 0.9 acre of forested wetlands to emergent/scrub-shrub wetlands. The forested wetlands would be cleared during construction and then maintained as emergent/scrub-shrub wetlands for the life of the line. Similarly, all wetland areas located within the proposed TL ROW would be subject to periodic vegetation management, and maintained as herbaceous or scrub-shrub wetland vegetation or open water.

In accordance with Clean Water Act Section 404 and 401, the proposed wetland fill for the substation and forested wetland conversion along the ROW are subject to the regulation of the U.S. Army Corps of Engineers (USACE) Nashville District and Tennessee Department of Environment and Conservation (TDEC) to ensure no net loss of wetland and the function and values they provide. As a result of TVA's siting procedure and alternative selection TVA has determined that there is no practicable alternative to the proposed Action Alternative and its associated wetland impacts. TVA would comply with permit requirements of the USACE/TDEC. As a result of the proposed BMPs that would be in place during construction, maintenance, and operation, and fulfilling any required USACE permit requirements, the project would have no significant adverse direct, indirect, or cumulative impacts to wetland areas or to the associated wetland functions and values provided within the general watershed.

Based on the results of its surveys, TVA finds that the proposed project has the potential to affect archaeological sites 40MO165 and 40MO166. TVA would create a sensitive area buffer (10-meter radius) surrounding these two sites. TVA would avoid effects to both sites by: (1) not locating any TL poles, guy wire anchors, or other infrastructure within the sensitive areas; (2) avoiding the use of heavy equipment within the sensitive areas; and (3) conducting any necessary vegetation clearing within the sensitive areas by hand or by using a feller-buncher, before moving all cut materials outside the sensitive areas. With these avoidance measures in place, the proposed project would have no effects on sites 40MO165 and 40MO166.

The proposed project has potential for direct and indirect adverse effects to NRHP-eligible Sixteen Tunnel. TVA determined that the proposed action would result in no physical effects to Sixteen Tunnel, but would result in an adverse visual effect due to the installation of TL structures (poles) and conductor (cable) within view of this property. In July 2016, TVA and the Tennessee State Historic Preservation Officer (SHPO) entered into a Memorandum of Agreement (MOA) for the resolution of these potential adverse effects to Sixteen Tunnel should TVA decide to proceed with the project. The MOA identified stipulations that TVA would complete in order to mitigate potential adverse effects (see mitigation section). With implementation of these stipulation measures, TVA finds that the proposed undertaking would have no adverse effects on Sixteen Tunnel.

In June 7, 2016 and August 23, 2016 letters, the Tennessee SHPO concurred with TVA's determinations. TVA also consulted with federally recognized Indian tribes regarding historic properties within the APE that may be of religious and cultural significance and may eligible for the NRHP. TVA did not receive any responses within the 30-day comment period.

Public 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. 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 a project open house. TVA used local news outlets and notices placed in the local newspapers to notify other interested members of the public to the open house. The open house was held on April 3, 2014 in Sunbright, Tennessee. At the open house, TVA presented a network of alternative TL routes, comprised of 16 different line segments and 3 alternative substation sites, to the public for comment. A 30-day public review and comment period was held following the open house, and TVA accepted public comments on the alternative TL routes, substation sites, and other issues.

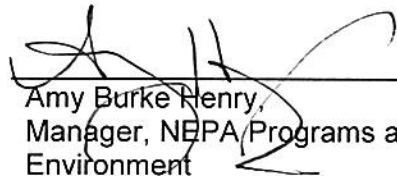
Mitigation

TVA will implement the routine environmental protection measures listed in the EA. In addition to those routine measures, the following non-routine measures, as described in Section 2.6 of the EA, would be implemented to reduce the potential for adverse environmental effects.

- Any pesticide/herbicide use as part of construction or maintenance activities will comply with the TDEC general permit for application of pesticides, which also requires a pesticide discharge management plan. In areas requiring chemical treatment, only USEPA-registered and TVA-approved herbicides would be used in accordance with label directions designed in part to restrict applications near receiving waters and to prevent unacceptable aquatic impacts.
- TVA will comply with any permit requirements of the USACE/TDEC.
- In order to avoid potential effects to archaeological sites 40MO165 and 40MO166, TVA will create a sensitive area (10-meter buffer) surrounding these two sites. These sensitive areas would be marked on all drawings and profiles used in construction, as well as on documents that would be used in future operation and maintenance of the proposed transmission line. To further avoid the sites, TVA will:
 - Not locate any TL poles, guy wire anchors, or other infrastructure within the sensitive areas;
 - Avoid using heavy equipment within the sensitive areas.
 - Conduct any necessary vegetation clearing within the sensitive areas by hand with tools such as chain saws or by using a feller-buncher, and move all cut materials outside the sensitive areas.
- To mitigate the potential adverse effects to the NRHP-eligible Sixteen Tunnel, TVA and the Tennessee SHPO will enter into a Memorandum of Agreement (MOA). TVA will complete a NPS NRHP Registration Form (NPS 10-900) for Sixteen Tunnel and submit it to the Tennessee SHPO for review, and then to the National Park Service, according to the stipulations of the MOA.
- To remove any potential for direct effects to Indiana bat and northern long-eared bat, TVA would clear the 67 acres of potentially suitable summer roosting bat habitat between October 15 and March 31.
- To mitigate indirect impacts to Indiana bat resulting from removal of suitable summer roost habitat, TVA would enter into an agreement with TWRA wherein TVA would contribute \$200,000 to TWRA for the protection, enhancement, and monitoring of known and currently unprotected, Indiana bat maternity habitat in Tennessee.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of constructing a 7.5-mile long 69-kV TL and 161-kV substation to supply power to the Sunbright service area 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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2/16/17
Date Signed