

FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

OCOEE 2-OCOEE 3 TRANSMISSION LINE REPLACEMENT POLK COUNTY, TENNESSEE

Proposed Action and Need

The existing TVA transmission line (TL) between the Ocoee Number 2 and Ocoee Number 3 hydroelectric power plants is in poor condition. This has led to outages and reliability problems. Some structures have deteriorated to the point where they need immediate replacement. TVA needs a reliable TL to connect the two Ocoee plants and to reduce the risk of losing access to this generation. This TL and these two generating plants play a valuable part in supporting the power system and meeting peak power demand. In order to meet this need, TVA proposes to replace its Ocoee 2-Ocoee 3 transmission line.

Alternatives

TVA has considered four alternatives for replacing its Ocoee 2 - Ocoee 3 transmission line: Rebuild in Place (Alternative 1), Build Using New ROW in the Ocoee Gorge (Alternative 2), No Action (Alternative 3), and Build Using New ROW South of the Ocoee River (Alternative 4).

Under Alternative 1, TVA would rebuild the TL in place. This alternative would take place over a 36-month period. Activities would take place outside of peak demand periods. Construction would use helicopters due to the steep terrain. A pole yard (laydown yard) would be established for worker assembly, vehicle parking, and material storage.

Under Alternative 2, TVA would build a new TL along new and existing ROW along a four-mile corridor adjacent to the existing corridor in the Ocoee Gorge. About 36 acres of additional ROW would be needed. Construction would use helicopters but would be faster (11 months) because the existing TL would not need to be de-energized for long periods while construction was taking place. A pole yard would be established as described under Alternative 1.

Under Alternative 3 (no action), TVA would maintain and rebuild the existing TL when emergencies or failures required it. Rebuilding activities would not be scheduled, and a pole yard would not be established. TVA estimates that these required activities would take place over a 10-year period.

Under Alternative 4, TVA would build a new TL along new ROW to the south of the Ocoee River. The line length would be 4.7 miles and 56 acres of ROW would be needed. As with Alternatives 1 and 2, a pole yard would be established. Construction would require about 8 months. Alternative 4 would relocate the TL outside of the Ocoee Scenic Byway Corridor and is TVA's preferred alternative.

In all alternatives, special conditions would be added to avoid, minimize, or mitigate environmental impacts. Because new corridors evaluated would require the use of

property managed by the USDA-Forest Service as part of the Cherokee National Forest, the Forest Service was a cooperating agency in the preparation of an Environmental Assessment (EA) of the project, which is incorporated by reference.

Impacts Assessment

Alternatives 2 and 4 would create new corridors through the Cherokee National Forest, converting forest habitat to early successional habitats and open lands. Biological elements affected by these new corridors include mesic deciduous forest, eastern hemlock and white pine forest, oak and oak-pine forest, pine and pine-oak forest, and riparian habitats. The amount of acreage impacted in these forested habitats would total between 50 and 70 acres, depending on the alternative selected. Because construction would span the deep gorges, minimal impacts to riparian habitats are expected. Construction under any alternative would not likely adversely affect endangered or threatened species.

New corridor construction would also create new disturbances, with potential for soil erosion and sedimentation. Herbicides would also be used in ongoing maintenance of rights of way and in construction and maintenance of new rights of way. These materials could potentially be transported into surface water with aquatic ecology impacts. However, with the rigorous implementation of best management practices and adherence to label requirements when herbicides are applied, the potential for adverse impacts to non-target plants and animals would be minimal.

The existing transmission line is potentially eligible for the National Register of Historic Places. The historic structures would be removed under all alternatives. In addition, TVA has surveyed the proposed new corridor and determined that under Alternative 4, a potentially eligible archeological site could be affected by use of National Forest System Road 45 as an access road for construction. To avoid adverse effects, measures would be applied to prevent rutting and all access activity would stay within the existing road prism. On September 12, 2006, TVA and the Tennessee State Historic Preservation Officer (SHPO) executed a Memorandum of Agreement to resolve the adverse effects of removal of the existing transmission line, and to document that the impacts of this project on historic properties have been taken into account.

Implementation of Alternative 1, 2, or 3 would result in the continued presence of the entire length of the TL in the Ocoee Scenic Byway corridor, while implementation of Alternative 4 would result in removing the visual and aesthetic presence from the corridor, except for short segments at the beginning and end of the TL. However, implementation of Alternative 4 would result in a new corridor through the black bear habitat management area.

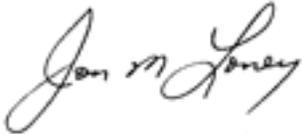
Public and Intergovernmental Review

Because of the need to obtain a Special Use Permit for new corridor construction, TVA has closely cooperated with the Forest Service throughout the preparation of the EA. The project was listed in the Schedule of Proposed Actions for the Cherokee National Forest beginning on April 1, 2005. The project was also noticed in the Knoxville News-Sentinel and on the TVA web page. Letters were also sent to individuals and organizations who have expressed interest in being notified of Cherokee National Forest actions, as well as to local, state, federal, and tribal agencies. Three comment letters were received. The Eastern Band of the Cherokee Indians requested a Phase I archaeological survey of the project's area of potential effect. This was completed and coordinated with them. The Tennessee Conservation League requested an analysis of the alternative of rebuilding the TL in place. This alternative has been analyzed in the

EA. Mr. Ken Jones requested that potential impacts on trails be included. This was included in the analysis. TVA also prepared a Biological Evaluation and consulted with the U.S. Fish and Wildlife Service and coordinated the preparation of a Memorandum of Agreement with the State Historic Preservation Officer.

Conclusion and Findings

As mentioned above, TVA finds that the project would not likely adversely affect endangered and threatened species. By letter of September 27, 2006, the U.S. Fish and Wildlife Service concurred with this determination. TVA finds that the project would have an adverse effect on the National Register-eligible Ocoee 2-Ocoee 3 Transmission Line. Execution of a MOA dated September 12, 2006 is evidence that TVA has taken historic properties into account and that adverse effects have been mitigated to insignificant levels. Based on the analyses in the EA, implementation of Alternatives 1, 2, 3, or 4 would not have significant effects on the quality of the human environment. TVA concludes that construction of the Ocoee 2-3 TL under any of the alternatives analyzed in the attached EA would not be a major federal action significantly affecting the environment. Therefore, an EIS is not required. This FONSI is contingent upon implementation of the attached mitigation measures.



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Date Signed

Ocoee 2-Ocoee 3 Transmission Line Replacement

Mitigation Measures

The following measures would be taken to reduce the potential for adverse environmental effects.

I. General

Because the existing TL and all proposed alternatives are within a national forest, coordination with USFS personnel will be maintained throughout the project. USFS contacts are Monte Williams, Ocoee/Hiwassee District Ranger, CNF, 423 338-5201, and Dan Herron, CNF Southern District Special Use Coordinator, 423 338-5201.

II. Herbicide Application

The following mitigation measures from the 1989 USFS VMEIS (supplemented in 2002) would be used by TVA when applying herbicides.

- Herbicides are applied according to labeling information and the site-specific analysis done for projects. This labeling and analysis are used to choose the herbicide, rate, and application method for the site. They are also used to select measures to protect human and wildlife health, non-target vegetation, water, soil, and threatened, endangered, proposed, and sensitive species. Site conditions may require stricter constraints than those on the label, but labeling standards are never relaxed.

Choice of Herbicide

- Only herbicide formulations (active and inert ingredients) and additives registered by EPA and approved by the Forest Service for use on national forests are applied.
- Herbicides and application methods are chosen to minimize risk to human and wildlife health and the environment. No class B, C, or D chemical (table 11-I) may be used on any project, except with Regional Forester approval. Approval will be granted only if a site-specific analysis shows that no other treatment would be effective and that all adverse health and environmental effects will be fully mitigated. Whenever possible and effective, class 4 or 5 mineral oil is used in place of diesel oil in mixtures for application.

Application Rate

- Herbicides are applied at the lowest rate effective in meeting project objectives and according to guidelines for protecting human and wildlife health. Application rate and work time must not exceed the following typical levels unless a supplementary risk assessment shows that proposed rates do not increase risk to human or wildlife health or the environment beyond standards discussed in Chapter IV.

Typical application rates (lb/at) of active ingredient are:

	<u>2,4-D/a</u>	<u>2,4-D/e</u>	<u>2,4-DP</u>	<u>Dicamba</u>	<u>Fosamine</u>	<u>Glyphosate</u>	<u>Hexazinone</u>	<u>Imazapyr</u>
AL	2.0	2.5	3.0		6.0	1.5	1.5	0.75
AG							1.7	
ML	2.5	4.0	4.0	2.0	7.8	1.5	1.7	0.75
MG							1.7	
HG							1.7	
HF	2.0	2.0	1.0	2.0		1.0	0.5	0.75
HB		1.7	1.2					
HS							1.7	
HL	2.0			1.5		1.3		0.75

	<u>Fuel Oil</u>	<u>Limonene</u>	<u>Picloram</u>	<u>Sulfometuron methyl</u>	<u>Tebuthluron</u>	<u>Triclophr/a</u>	<u>Triclopyr/e</u>
AL	0.5	0.9	0.5	0.13	1.0	3.0	4.0
AG					1.0		
ML	2.0	0.9	0.7	0.17	1.0	4.0	4.0
MG					1.0		
HG							
HF	1.5	0.9	0.4	0.06	4.0	1.4	1.0
HB	1.0	0.9					1.9
HS					4.0		
HL			0.3				

Key: AL= aerial liquid treatment
 AG=aerial granular treatment
 ML=mechanical liquid treatment
 MG=mechanical granular treatment
 HG>manual (hand) granular treatment
 HF>manual foliar broadcast treatment

HB=manual basal treatment
 HS=manual soil-spot treatment
 HC=manual cut-surface treatment

Application Method

- Public safety during such uses as viewing, hiking, berry picking, and fuelwood gathering is a priority concern. Method and timing of application are chosen to achieve project objectives while minimizing effects on non-target vegetation and other environmental elements. Selective treatment is preferred over broadcast treatment. Application methods from most to least selective are:
 - Cut surface treatments
 - Basal stem treatments
 - Directed foliar treatments
 - Soil spot (spot around) treatments
 - Soil spot (spot grid) treatments
 - Manual granular treatments
 - Manual/mechanical broadcast treatments

Drift Control

- Weather is monitored and the project is suspended if temperature, humidity, or wind become unfavorable as follows:

	Temperatures Higher Than	Humidity Less Than	Wind (at Target) Greater Than
<u>Ground:</u>			
Hand (cut surface)	N.A.	N.A.	N.A.
Hand (other)	98 F	20 percent	15 mph
Mechanical (liquid)	95 F	30 percent	10 mph
Mechanical (granular)	N.A.	N.A.	N.A.
<u>Aerial:</u>			
Liquid	90 F	50 percent	5 mph
Granular	N.A.	N.A.	8 mph

- Nozzles that produce large droplets or streams of herbicide are used. Nozzles that produce fine droplets are used only for hand treatment where distance from nozzle to target does not exceed 8 feet.

Supervision and Training

- A certified pesticide applicator supervises each application crew and trains crew members in personal safety, proper handling and application of herbicides, and proper disposal of empty containers.
- If work is contracted out, each contract manager, who must ensure compliance on contracted herbicide projects, is a certified pesticide applicator. Contract inspectors are trained in herbicide use, handling, and application.

Protection of Workers

- Workers who handle herbicides must wear a long-sleeved shirt and long pants made of tightly woven cloth that must be cleaned daily. They must wear a hard hat with plastic liner, waterproofed boots and gloves, and other safety clothing and equipment required by labeling. They must bring a change of clothes to the field in case their clothes become contaminated.
- Each work crew must take soap, wash water separate from drinking water, eyewash bottles, and first aid equipment to the field.
- Contractors ensure that their workers use proper protective clothing and safety equipment required by labeling for the herbicide and application method.
- Workers must not walk through areas treated by broadcast foliar methods on the day of application.
- Supervisors must ensure that monitoring is adequate to prevent adverse health effects. Workers displaying unusual sensitivity to the herbicide in use are medically evaluated and, if tested as sensitive to the herbicide in use, are reassigned to other activities.

Protection of the General Public and Private Land

- Notice signs (FSH 7109.11) are clearly posted, with special care taken in areas of anticipated visitor use.
- Buffers are clearly marked before treatment so applicators can easily see and avoid them.
- No herbicide is aerially applied within 200 horizontal feet of an open road or a designated trail. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

Protection of Non-Target Vegetation

- No soil-active herbicide is applied within 30 feet of the drip line of non-target vegetation (e.g., den trees, hardwood inclusions, adjacent stands) within or next to the treated area. Side pruning is allowed, but movement of herbicide to the

root systems of non-target plants must be avoided. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

Protection of Threatened, Endangered, Proposed, and Sensitive Species

- Triclopyr is not ground-applied within 60 feet, of known occupied gray, Virginia big-eared, or Indiana bat habitat. The same buffers are used with any formulation containing kerosene or diesel oil around habitat of any threatened, endangered, proposed, or sensitive bird during its nesting season. Buffers are clearly marked before treatment so applicators can easily see and avoid them.
- No herbicide is ground-applied within 60 feet, of any known threatened, endangered, proposed, or sensitive plant. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

Protection of Water and Soil

- Application equipment, empty herbicide containers, clothes worn during treatment, and skin are not cleaned in open water or wells. Mixing and cleaning water must come from a public water supply and be transported in separate labeled containers.
- No herbicide is broadcast on rock outcrops. No soil-active herbicide with a half-life longer than 3 months is broadcast on slopes over 45 percent, erodible soils, or aquifer recharge zones. Such areas are clearly marked before treatment so applicators can easily see and avoid them.
- No herbicide is ground-applied within 30 horizontal feet of wetlands or perennial or intermittent springs and streams. No herbicide is applied within 100 horizontal feet of any public water source. Selective treatments (which require added site-specific analysis and use of aquatic-labeled herbicides) may occur within these buffers only to prevent significant environmental damage such as noxious weed infestations. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

Control of Spills

- During transport, herbicides, additives, and application equipment are secured to prevent tipping or excess jarring and are carried in a part of the vehicle totally isolated from people, food, clothing, and livestock feed.
- Only the amount of herbicide needed for the day's use is brought to the site. At day's end, all leftover herbicide is returned to storage.
- Herbicide mixing, loading, or cleaning areas in the field are not located within 200 feet of private land, open water or wells, or other sensitive areas.
- During use, equipment to store, transport, mix, or apply herbicides is inspected daily for leaks.
- Containers are reused only for their designated purpose. Empty herbicide containers are disposed of according to 40 CFR 165.9 Group I & II Containers.

- Accident preplanning is done in each site-specific analysis. Emergency spill plans (FSM 2109.12, chapter 30) are prepared. In the unlikely event of a spill, the spill is quickly contained and cleaned up, and appropriate agencies and persons are promptly notified.

III. Sensitive and other Species

- Helicopters or other low-level aircraft would continue to be restricted from an area 0.5 mile around the known bald eagle nest approximately 2.2 miles from the existing TL from January 1-June 31.
- To minimize impacts on black bear within the black bear MA, access roads along the ROW after construction would be closed to vehicle use according to RLRMP requirements.

IV. Erosion, Sedimentation, and Polluted Runoff

- Prior to the start of ground disturbance, a qualified geologist would inspect the route of the line and mark the areas of most concern for the presence of pyrite. If needed, areas with potential would be tested to confirm the presence or absence of pyrite. Any spoil from augering or grading for crane pads where pyrite is found would be spread over limestone gravel and covered with lime to neutralize any acid created from pyrite.
- In upgrading access roads and the pole yard, bulldozer blades would not be used to scrape the ground to expose bare soil.

V. Visual Resources and Recreation

- Clearing of the ROW would be limited in valleys. Only the trees tall enough to interfere with the conductor would be removed. Mowing or bush hogging would be done prior to herbicide treatment to minimize the amount of herbicide used and the visual effect of browned dead vegetation.
- The recreating public would be notified of upcoming herbicide applications, and signs would be located along trails that would cross areas of herbicide application.
- Trail and road users would be provided with advance notice of any construction affecting the trail or road as far ahead of time as possible and would be directed with signs to substitute trails, if available.
- Temporary road and/or skid trail crossings across designated forest trails would be kept to a minimum.
- Any crossings would be as perpendicular as possible to designated forest trails.
- Designated forest trails would not be used as haul roads/access routes if possible.
- If trails must be crossed or used as skid trails/haul roads, trail cleanup/rehabilitation would be done after TL construction to meet applicable USFS trail standards.

- Where possible, character trees and trees that define the trail corridor would be retained.
- Changes to trail alignment and surfacing would be minimized; the trail would not be straightened or its surface changed unless alternate material would enhance the trail and protect resources. Place warning signs on all trail access points and along the trail where activities are occurring.
- New structures would be brown and thus would be less visible (unless seen with sky in background) than most structures on the existing line.
- To minimize safety hazards, noise, and visual intrusions to recreational users on the river, overflights to store material at the pole yard before the start of construction would be conducted before the rafting season. Overflights during construction would be scheduled for days when the river is not flowing if possible. If overflights are required on days when the river is flowing, they would be routed upstream of Ocoee 2 Dam, where water use would be much less than below Ocoee 2 Dam. Overflights to install the new conductor and remove the existing conductor would be done only when the river is not flowing.
- To protect recreators and minimize noise impacts, all helicopter flights would be routed to avoid the Thunder Rock Campground and the trails near Ocoee 3.
- To minimize noise impacts, construction traffic on access roads would be limited to daylight hours.
- Slash would be treated to within an average of 4 feet of the ground when visible within 100 feet on either side of Concern Level 2 travel routes. When activities are occurring along open trails, slash would be treated within 100 feet of the corridor daily.
- Root wads and other unnecessary debris would be removed or placed out of sight within 150 feet of key viewing points.
- Slash would not be placed in trail tread during construction and future maintenance.

VI. Cultural Resources Protection

- To minimize rutting of archaeological site 40PK132 only low-pressure tired equipment would be used for work in that vicinity.
- All work in the vicinity of site 40PK132 would be conducted when ground conditions are dry and firm.
- If the above two measures are not possible, rubber matting would be used underneath all equipment in the vicinity of site 40PK132.
- All access activity would stay within existing NFS Road 45 in the vicinity of archaeological site 40PK132.

- TVA will comply with all stipulations in the Historic Structures Treatment Plan for the Ocoee 2-3 TL which are included in the Memorandum of Agreement dated September 12, 2006.