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FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
JOHN SEVIER FOSSIL PLANT ADDITION OF GAS-FIRED
COMBUSTION TURBINE/COMBINED-CYCLE GENERATING CAPACITY
AND ASSOCIATED GAS PIPELINE

Proposed Action and Need

The Tennessee Valley Authority (TVA) proposes to construct and operate a new gas-fired combustion turbine/combined-cycle (CT/CC) generating plant on the site of its John Sevier Fossil Plant (JSF) adjacent to the Holston River in Hawkins County, Tennessee. The JSF CC facility would be operated to provide TVA with intermittent to base-load generation and help TVA meet obligations to reduce nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions under the *Clean Air Act* and an Order issued by the U.S. District Court for the Western District of North Carolina. Under that Order, TVA is required to install NO_x and SO₂ emission controls on its coal units at JSF by January 1, 2012. Construction and operation of the JSF CC plant would provide the needed generation to meet the power needs of the power transmission system and would allow TVA to meet the emission limits and court-ordered timetable for emission reductions for JSF.

A dependable supply of natural gas must be delivered to the JSF CC facility to enable plant operations. TVA proposes to contract with ETNG to deliver natural gas to the JSF CC plant. The attached environmental assessment (EA) presents the environmental evaluation of the proposed JSF CC plant construction and operation, and the construction and upgrades of 28 miles of natural gas pipeline to serve the proposed JSF CC plant. The EA is incorporated by reference.

Alternatives

In accordance with the *National Environmental Policy Act* (NEPA), TVA developed and evaluated two feasible alternatives for the proposed actions in the attached EA. These were the No Action Alternative and the Action Alternative.

Under the No Action Alternative, TVA would not construct a new gas-fired facility and installation of a natural gas pipeline to serve the proposed CC plant would not be completed. TVA would continue to operate the JSF facility under the current operating plans, which include the planned installation of NO_x and SO₂ reduction systems. Under this alternative, once the plans to install SCRs and scrubbers are implemented, TVA would be able to meet all *Clean Air Act* (CAA) requirements in the *North Carolina v. TVA* lawsuit. However, under this alternative, TVA would not meet the court-imposed schedule for SCR and scrubber installation and still maintain system reliability.

Under the Action Alternative, TVA would construct and operate a new gas-fired CT/CC facility on the JSF reservation and contract with ETNG to construct and upgrade approximately 28 miles of natural gas pipeline. The proposed facility would utilize the existing JSF facility infrastructure such as the transmission lines and raw water intake systems. Construction of the plant would be a two-phase project with construction starting as early as April 2010, and

operation of the CT/CC generating plant as early as January 1, 2012. Phase 1 would be the construction of the single-cycle (SC) CTs capable of generating 579 MW, and Phase 2 would be the construction of a CT/CC plant capable of generating an additional 300 MW. The new CT/CC plant net output would be approximately 878 MW. Construction of the gas pipeline would begin in mid-March 2011 with an anticipated in-service date in September 2011.

Impacts Assessment

Based on the analyses in the EA, TVA concludes that implementation of the Action Alternative would not affect prime or unique farmland, parks, or natural areas. Similarly, no modification to recreational opportunities, navigation, or wild and scenic rivers would be involved. The proposal would have minor and insignificant impacts on terrestrial vegetative or wildlife communities, aquatic ecology and aquatic life, water quality, wetlands, visual and aesthetic quality, and socioeconomics of the area. No effects to floodplain functions are anticipated, and the proposed action is consistent with Executive Order 11988 on floodplain management. There would be no disproportionate effects to minority or low-income populations. Impacts to transportation would be temporary and minor. Construction activities would cause a short-term increase in noise. Noise associated with plant operation is not expected to be a major annoyance to the local community, and pipeline operation is not expected to result in noise impacts. Although the proposed action would permanently affect about 55 acres on the JSF reservation and 61 acres associated with the gas pipeline. This would increase the fragmentation of forests along the proposed gas pipeline route, but is not expected to adversely affect plant or wildlife communities.

Operation of the proposed CT gas-fired units would result in benefits to local and regional air quality.

No adverse impacts on federally or state-listed plant and aquatic animal species or their habitat would occur at the JSF site. Furthermore, the proposed actions at the JSF site would have no effect on the bald eagle, gray bat, Indiana bat, or their nesting, roosting, or foraging areas. Although suitable habitat for two state-listed animals exists at the JSF site, the potential displacement of the two species would not be expected to measurably affect either species because of their mobility, wide range of habitat preferences, and presence of suitable habitat in the area.

Because no federally or state-listed plants are reported from the pipeline project area, no federally or state-listed plants would be affected by the proposed pipeline construction and operation. Construction of the proposed gas pipeline has the potential to adversely affect Indiana bats and their habitat. In order to comply with Section 7 of the *Endangered Species Act*, TVA and ETNG sought concurrence from the USFWS for proposed mitigation measures to minimize potential impacts to Indiana bats along the gas pipeline corridor. In a letter dated March 9, 2010, the USFWS provided concurrence to TVA supporting these findings. Therefore, with the implementation of the proposed mitigation measures, the proposed action is not likely to adversely affect Indiana bats.

The proposed action would not adversely affect any historic properties eligible for or listed in the National Register of Historic Places (NRHP). In a response dated December 29, 2009, the Tennessee State Historic Preservation Officer (SHPO) determined that with implementation of a vegetation plan to screen the historic JSF facility, impacts to the historic property would be insignificant. The Tennessee SHPO has concurred with this determination.

One site eligible for listing in the NRHP occurs in the pipeline route. Moving the pipeline route to avoid the eligible site was not practicable. In a letter dated January 26, 2010, TVA proposed mitigation measures and requested concurrence from the Virginia SHPO for the determination that impacts to the proposed pipeline would be insignificant with the implementation of the proposed mitigation measures. In a letter dated March 05, 2010, the Virginia SHPO concurred with TVA's findings.

Mitigation

In addition to the requirements of any necessary permits, the following mitigation measures would be implemented to reduce potential environmental effects.

- TVA will maintain an emissions ledger on file based on operational inputs (e.g., CT operational hours, coal combustion emissions, fugitive sources) and will adjust facility operations to maintain compliance.
- Vegetation clearing of the pipeline ROW in wetland areas will be restricted to a 10-foot-wide cleared strip centered over the pipeline for maintenance purposes. Additionally, trees within 15 feet of the pipeline greater than 15 feet in height will be selectively cut and removed from the permanent ROW. The 0.92 acre of wetlands disturbed during construction will be allowed to return to preconstruction conditions.

Pursuant to Section 7 of the ESA, and with concurrence from the U.S. Fish and Wildlife Service (USFWS), TVA would implement the following mitigation measures below:

- To avoid potential impacts to Indiana bats, a USFWS approved contractor will survey for Indiana bats along the proposed route using guidelines specified in the USFWS Indiana Bat Draft Recovery Plan (April 2007). The consultant will work closely with the respective USFWS offices to determine appropriate survey efforts.
- If Indiana bats are not captured, trees will be removed along the proposed ROW as needed. If Indiana bats are captured, individual bats will be equipped with radio transmitters, released, and followed to roost trees. If active roosts were found in a tree within the project workspace, ETNG will avoid impacts to confirmed roosting trees to the maximum extent practicable.
- If avoidance of a roosting tree is not practicable, and formal consultation with the USFWS becomes necessary, ETNG will comply with all reasonable and prudent measures, terms, and conditions resulting from the formal consultations.
- If impacts to Indiana bat habitat are not avoidable along the project corridor, TVA will work with the USFWS to identify habitat on nearby TVA lands that could be improved to provide suitable roost habitat for Indiana bats. Proposed improvement activities could include modifying forest characteristics in a manner to benefit foraging bats (i.e., remove vegetation within the midstory) and create suitable roosting sites (i.e., create snags).

Pursuant to 36 CFR Part 800 of Section 106 of the NHPA, and with concurrence from the Tennessee SHPO and the Virginia SHPO, TVA would implement the following mitigation measures to ensure that historical and archaeological resources would not be adversely impacted.

- TVA has committed to place sufficient vegetation between the JSF historic property and the proposed JSF CC facility to screen it from the historic property.
- Pipeline upgrades will be confined to the boundaries of the existing trench within the boundaries of Site 44WG248. Timber mats will be employed for access to the site, and a straw barrier will be used to separate the spoil piles from the site surface and prevent ground impacts when the spoil is returned to the trench. The proposed work will not disturb any intact archaeological deposits and will be confined to the previously disturbed portions of the site. An archaeological monitor will be present during construction to ensure that no intact archaeological deposits are disturbed

Additionally, as a standard practice, specific mitigation measures and BMPs identified in the EA would be implemented to minimize potential environmental effects associated with the construction and operation of the proposed JSF CC plant.

Further mitigation measures pertaining to the construction and operation of the gas pipeline have been identified by ETNG. ETNG will be the responsible party implementing and tracking completion of mitigation measures identified for the gas pipeline project. ETNG will inform TVA as to the progress of pipeline construction and suitability of the identified mitigation measures.

Public and Intergovernmental Review

TVA and ETNG consulted with the following agencies and stakeholders regarding the proposed CT/CC facility and associated pipeline.

Federal Agencies

- National Park Service
- U.S. Army Corps of Engineers, Nashville District Office
- U.S. Army Corps of Engineers, Norfolk District Office
- U.S. Department of Energy
- U.S. Fish and Wildlife Service, Tennessee Field Office
- U.S. Fish and Wildlife Service, Virginia Field Office

County and State Agencies

- Hawkins County Mayor's Office
- Tennessee Department of Environment and Conservation
- Tennessee Historical Commission
- Tennessee Wildlife Resources Agency
- Virginia Department of Environmental Quality
- Virginia Historical Commission

On October 22, 2009, the Federal Energy Regulatory Commission issued a notice of intent (NOI) in the *Federal Register* for the proposed pipeline project. The final EA and FONSI will be mailed to agencies and stakeholders and will be posted on TVA's Web page with a 15-day comment period on the proposed action.

Conclusion and Findings

TVA sought concurrence from the USFWS for concurrence that, with the implementation of proposed mitigation measures, Indiana bats would not be adversely affected by the proposed action. USFWS provided concurrence to TVA supporting these findings; therefore TVA's obligations under Section 7 of the *Endangered Species Act* have been satisfied.

Pursuant to 36 CFR Part 800 of Section 106 of the NHPA, TVA consulted with the Tennessee SHPO regarding the historic property eligible for listing in the NRHP on the JSF reservation. As recommended by the Tennessee SHPO, TVA has committed to place sufficient vegetation between the historic property and the proposed JSF CC facility to screen it from the historic property. The Tennessee SHPO indicated that there would be no objection to implementation of the proposed action with the installation of the vegetative screen. In Virginia, a site eligible for listing in the NRHP occurs within the proposed pipeline route, and moving the pipeline to avoid the site was not practicable. TVA consulted with the Virginia SHPO and requested concurrence for the determination that, with the implementation of proposed mitigation measures, the site would not be adversely affected. Virginia SHPO has concurred with TVA's findings. TVA's obligations under Section 106 of the *National Historic Preservation Act* have been satisfied.

No placement of fill within the floodplain would be necessary, and proposed actions would not affect floodplain values or functions adversely. Implementation of the Action Alternative would be consistent with Executive Order (EO) 11988, Floodplain Management. Impacts to wetlands would be insignificant and no major effects to wetland functions from the proposed actions are anticipated; thus, adoption of the Action Alternative is consistent with EO 11990, Protection of Wetlands.

Based on the findings of the EA and the implementation of stated mitigation measures, TVA concludes that the proposed construction and operation of a new gas-fired CT/CC generating plant and 28 miles of associated natural gas pipeline, as proposed under the Action Alternative, would not be a major federal action significantly affecting the quality of the environment. Accordingly, an environmental impact statement is not required.



3-12-10

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Date Signed