

**ADOPTION AND FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
WEST TENNESSEE SOLAR FARM PROJECT**

The Tennessee Valley Authority (TVA) is proposing to enter into a power purchase agreement (PPA) with the State of Tennessee for the purchase of power generated at the proposed West Tennessee Solar Farm (“Solar Farm”) in Haywood County, Tennessee. Additionally, TVA is providing \$400,000 in support of the educational mission of the solar farm. Eligible uses for these funds include, but are not limited to, the design of educational programs, marketing materials, interpretive displays, and other resources that would be used to inform the public regarding the benefits of solar power and possibly other alternative energy resources.

The U. S. Department of Energy (DOE) reviewed the potential impacts of constructing and operating the proposed Solar Farm, the associated visitor’s center, potential transmission line routes, and the interstate exit/entrance ramp modifications in an environmental assessment (EA). DOE issued the final EA, finding of no significant impact (FONSI), and mitigation action plan (MAP) on February 2, 2011 for the proposed Solar Farm. The DOE final EA and MAP are herein incorporated by reference. In addition, the Federal Highway Administration prepared documentation for its use of a categorical exclusion to evaluate the potential environmental impacts of its proposed road construction associated with the Solar Farm project.

The U.S. Department of Energy’s (DOE) stated purpose in their final EA is to distribute funds devolving from the American Recovery and Reinvestment Act of 2009 in order to further economic development and recovery. DOE allocated funds to award grants through the State Energy Program (SEP). The goals of the SEP include the reduction of impacts of energy production and use on the environment, the improvement of the reliability of electricity and fuel supply and the delivery of energy services, the reduction in reliance on imported energy, and the increase of energy efficiency to reduce energy costs and consumption for consumers, businesses, and government.

The State of Tennessee had applied to DOE for SEP funds to establish the Volunteer State Solar Initiative (the “Initiative”). The Initiative also involves the Tennessee Solar Institute, the Oak Ridge National Laboratory, and the University of Tennessee Research Foundation. As a component of the Initiative, the Solar Farm would be constructed in West Tennessee as a large-scale demonstration project of solar technology. The Solar Farm would serve as an educational tool for the public, highlighting renewable energy technology, as well as energy conservation methods such as Leadership in Energy and Environmental Design certification.

Although TVA and DOE are making different decisions relating to this project, the same on-the-ground activities and environmental impacts would occur as a result of their respective actions. DOE proposes to release ARRA funds for the construction and operation of the Solar Farm. TVA would enter into a purchase agreement for the purchase of power generated by the Solar Farm. Thus, the impacts of TVA’s actions are substantially the same as those of DOE’s actions. Accordingly, TVA staff has carefully reviewed DOE’s EA, supporting documentation, underlying reports, agency consultation letters, findings, and public comments to verify the adequacy of DOE’s assessment, and to ensure the bounding of potential impacts of TVA actions. Upon this determination of adequacy, TVA is adopting the DOE EA for purposes of its own NEPA review.

Alternatives

TVA considered two alternatives: the No Action Alternative and the Action Alternative. In the No Action Alternative, TVA would not enter into an agreement for purchase of power, potentially issue 26a permits for associated work in the transmission line right-of-way, or provide \$400,000 to support the Solar Farm's education mission. In the Action Alternative, TVA would enter into an agreement for the purchase of power and provide \$400,000 to support the Solar Farm's education mission.

In their environmental review of the project, DOE considered two alternatives: the No Action and the Action Alternative. Under the No Action Alternative, the facility and its ancillary features would not be built or operated and there would be no effects on the environment. TVA would not enter into an agreement for the purchase of power, or provide \$400,000 to the Solar Farm's educational programs because there would be no Solar Farm. The DOE Action Alternative involved the construction and operation of the Solar Farm, the visitor's center, and roadway improvements for access from Interstate 40 to the Solar Farm complex and potential transmission line routing by the distributor. Under the Action Alternative, DOE considered the impact of the project's implementation, leading to the potential purchase of the power by TVA and contribution of funds to the Solar Farm educational program. The potential for impacts of alternatives reviewed by DOE, therefore, encompassed any impacts that might accrue from TVA's actions.

Impacts Assessment

Approximately 104 acres would be affected by the project. Adverse impacts to land use, visual resources, geology and soils, biological resources, socioeconomics and environmental justice, utilities, transportation, waste management, health and safety, as well as cumulative impacts to these resources would either be minimal and/or temporary. Impacts to air quality, noise, and water resources would have minimal potential adverse impacts, subsiding after the 7-month construction period. The proposed project would not impact any aquifers designated as sole or principal drinking water resources for the Solar Farm area. Portions of the land where the Solar Farm would be constructed have been classified as prime farmland; however, it has been rezoned by the county from agricultural to light industrial use and the construction of the Solar Farm falls within the designated land use. No endangered or threatened species would be affected and the U.S. Fish and Wildlife Service has concurred with this determination. No historic properties would be affected and the Tennessee State Historic Preservation Officer has concurred with this determination.

Any impacts to jurisdictional wetlands or streams would be regulated by the U. S. Army Corps of Engineers through either an individual or a nationwide Section 404 Permit, and by the State of Tennessee through an individual or general Aquatic Restoration Permit. The Aquatic Restoration Permit applies to activities such as culvert installation and utility crossings, and the Section 404 Permit applies to projects involving the discharge of dredged or fill materials into waters of the U.S. including wetlands. In addition, any construction project that disturbs one or more acres of land requires a state-issued National Pollutant Discharge Elimination System permit for stormwater control. All of these permits require additional environmental consideration by the U. S. Army Corps of Engineers and the State of Tennessee as part of their permitting processes.

Construction activities could directly impact up to 586 linear feet of two unnamed stream channels during the installation of culverts and placement of fill material and grading impacts for the roadway modifications. These streams are already highly degraded from sediment

deposition, bank erosion, lack of riparian habitat, and channelization. The Solar Farm installation could increase impacts to these streams through increased surface soil exposure and increased stormwater runoff potential (from both the solar panel washing and the installation of impervious surfaces such as roads and parking lots), possibly leading to increased bank erosion and flood probability. Turbidity and siltation from construction activities such as excavation and grading would be short-term and localized. The discharge of fill material associated with this project would not be expected to have significant effects on water quality. In order to minimize siltation impacts to streams and wetlands during construction, appropriate erosion- and siltation-control measures, including the installation of silt fencing, would be installed and maintained along construction limits.

Three forested wetland areas totaling 1.29 acres located on a proposed transmission route right-of-way could be minimally impacted by vegetation clearing and/or pole replacement. If this transmission line right-of-way was selected, these wetlands would undergo detailed review, on-the-ground wetland delineation surveys, and assessment as required by the Section 404 permitting process; additional mitigation could be required by the U.S. Army Corps of Engineers at that time. There would be no impacts to jurisdictional wetlands from the proposed project on the Solar Farm site itself. Although online National Wetland Inventory data indicated the presence of a forested wetland near the northwestern corner of the project site, an August 2009 wetland delineation indicated that there were no jurisdictional wetlands on the project site. DOE therefore determined that the proposed action is not a wetland action as defined in 10 CFR Part 1022, Compliance with Floodplain/Wetlands Environmental Review Requirements because of the absence of jurisdictional wetlands on the project site. No further wetland assessments were therefore required.

Flood Insurance Rate Maps published by the Federal Emergency Management Agency indicate that there are no floodplains on the proposed project site and that the closest floodplain is approximately 3 miles downstream from the site and is associated with the Big Muddy Creek and Drainage Canal. DOE therefore determined that the proposed action is not a floodplain action as defined in 10 CFR Part 1022, Compliance with Floodplain/Wetlands Environmental Review Requirements because of the absence of floodplains on the project site. The compliance requirements for Executive Order 11988 Floodplain Management have been fulfilled.

Public and Intergovernmental Review

The Solar Farm proposal was the subject of a public scoping notice issued by the State of Tennessee from November 19, 2009, to December 4, 2009, and a public scoping meeting was held on November 19, 2009, in Brownsville, Tenn. DOE provided for public review of the draft environmental assessment from September 23, 2010, to October 22, 2010, and held a public scoping meeting on October 5, 2010 at the Haywood County Courthouse.

Mitigation

The environmental effects of the Solar Farm construction and operation were determined to be minor and insignificant. TVA's adoption and FONSI are contingent upon the State's adherence of the proponents to the requirements identified in DOE's Mitigation Action Plan (MAP) attached as an appendix to the final DOE EA. TVA has not determined the need for any additional mitigation measures.

Conclusion and Findings

TVA has independently reviewed the DOE EA, the underlying reports and public comments, and has found the DOE document to be adequate and fully encompassing of the environmental

effects and potential consequences of TVA's proposed actions. TVA is therefore adopting the 2011 DOE EA. Based on the EA, TVA concludes that entering into the PPA, and providing funding for the educational component of the proposed visitor's center would not be major federal actions significantly affecting the environment. Accordingly, preparation of an environmental impact statement is not required. This finding of no significant impact determination is contingent upon the State's adherence to the mitigation described above.



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Date Signed