

## **FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY**

### **OPTIMIST SOLAR AND BESS PROJECT**

The Tennessee Valley Authority (TVA) is a corporate agency of the United States that provides electricity for business customers and local power companies serving nearly 10 million people in parts of seven southeastern states in a region called the Tennessee Valley. TVA's mission is to serve the people of the Tennessee Valley region, and it does that through three main areas of work – energy, the environment, and economic development.

TVA produces or obtains electricity from a diverse portfolio of energy sources, including solar, hydroelectric, wind, biomass, fossil fuel, and nuclear. In June 2019, TVA completed an Integrated Resource Plan (IRP) and associated Environmental Impact Statement (EIS) (TVA 2019a, 2019b). The IRP identified the various resources that TVA intends to use to meet the energy needs of the TVA region over the 20-year planning period while achieving TVA's objectives to deliver reliable, low-cost, and cleaner energy and reduce environmental impacts. These energy resources from the 2019 IRP included the addition of between 1,500 and 8,000 megawatts (MW) of alternating current (AC) of solar capacity by 2028 and up to 14,000 MW by 2038 (TVA 2019a). Customer demand for cleaner energy prompted TVA to release a Request for Proposal (RFP) for renewable energy resources (2020 Renewable RFP).

As a result of the 2020 Renewable RFP, the Proposed Action consists of a Power Purchase Agreement (PPA) between TVA and MS Solar 7, LLC (herein referred to as "MS Solar 7") to purchase electric power and renewable energy credits generated by the proposed Optimist Solar Project (Project) in Clay County, Mississippi, subject to satisfactory completion of all applicable environmental reviews. The Project would be constructed by MS Solar 7 and is expected to generate up to 200 MW of AC output with a 50 MW AC – 200-megawatt hour (MWh) battery energy storage system (BESS). Under the terms of the PPA between TVA and MS Solar 7, dated December 14, 2020, TVA would purchase the electric output and renewable energy credits generated by the proposed Solar Facility for an initial term of 20 years, starting upon commercial operation and subject to satisfactory completion of all applicable environmental reviews. The resulting MS Solar 7 PPA would help TVA meet immediate needs for additional renewable generating capacity in response to customer demands and fulfill the renewable energy goals established in the 2019 IRP. The Proposed Action would provide cost-effective renewable energy consistent with the IRP and TVA goals.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA, which is incorporated by reference. The EA addresses the construction, operation, and maintenance of the proposed solar and associated BESS facility.

#### **Alternatives**

The subject EA evaluates two alternatives: the No Action Alternative and the Proposed Action Alternative. Under the No Action Alternative, TVA would not purchase the power generated by the Project under the 20-year PPA with MS Solar 7 (i.e., TVA would not be involved with the Project). If TVA were to select this alternative and MS Solar 7 elected not to proceed with the Project, then MS Solar 7 would not construct or operate the Solar Facility. Existing conditions

(land use, natural resources, visual resources, physical resources, and socioeconomics) at the Project Site would remain unchanged. TVA would continue to rely on other sources of generation described in the 2019 IRP (TVA 2019a) to ensure an adequate energy supply and to meet its goals for increased renewable energy and low GHG-emitting generation.

Under the Proposed Action Alternative, MS Solar 7 would construct and operate an up to 200 MW AC single-axis tracking PV solar facility with a 50 MW AC – 200 MWh BESS in Clay County, Mississippi, and TVA would purchase the renewable energy from the facility under the 20-year PPA with MS Solar 7 in accordance with the terms thereunder. The Project would connect to the existing TVA electrical network via TVA's West Point Substation. The Solar Facility would occupy portions of 29 individual parcels, which in their entirety would encompass approximately 2,952 acres of land that make up the Project Site. Approximately 1,540 acres would be used for the PV arrays, BESS, inverters, transformers, internal site access roads, Project substation, ancillary infrastructure, and construction laydown and parking areas. MS Solar 7 proposed three route options (Options A, B, and C; Option C being the preferred option) for the gen-tie connection to the Project substation and BESS, which would be located on one of two different parcels adjacent to the West Point Substation. The three options for the location of the Project substation and BESS would all be located within the Project Site study area. Depending on the route option selected, approximately 63 to 83 acres would be used for the installation of the gen-tie, "dead end" pole, and 0.4-mile-long TVA transmission line, in order to facilitate interconnection with TVA at the point of interconnect (POI) within the TVA West Point substation. The gen-tie would occur along one of three proposed easement routes through the parcels near the northern limits of the City of West Point. If the Project substation and BESS are constructed on one of the parcels within the Project Site adjacent to the West Point Substation, then the easement parcels would be used for installation of an approximately 3- to 4.1-mile-long collector line from the solar arrays to the Project substation, utilizing one of the same easement routes as the gen-tie line, before being delivered to the POI within the TVA West Point substation via an approximately 0.4-mile-long transmission line from the Project substation.

TVA's preferred alternative is the proposed Action Alternative. This alternative would meet the purpose of the project and would further promote TVA's need to provide low-cost, reliable and cleaner electricity; support environmental stewardship; and foster economic development in the Tennessee Valley for the next 20 years.

### **Impacts Assessment**

The potential impacts of the Proposed Action are described in detail in the EA. Implementation of the proposed action would have minor adverse impacts on land use, as the project site would change from undeveloped and agricultural to industrial. The surrounding area is largely agricultural, undeveloped, residential, and industrial, which would not be changed by the proposed project's land use. Minor adverse impacts related to groundwater, geology, and soils would occur as a result of the site grading and construction. The loss of prime farmland within the Proposed Project footprint would be minor when compared to the amount of land designated as prime farmland within the surrounding region and would be converted back upon Project decommissioning.

No direct impacts to wetlands would occur from the implementation of the Proposed Action; however, minor, indirect impacts could occur from erosion and sedimentation during construction but would be limited to the maximum extent practicable with best management practices (BMPs). Direct impacts to surface water features would be avoided by the solar arrays, with only the potential for minor indirect impacts from soil erosion and sedimentation during construction. Minimal, direct impacts of approximately 0.02-acre of surface waters would

occur under Option C due to culvert replacement of an existing access road. The proposed Project would be located outside of the Federal Emergency Management Agency (FEMA)-designated 100-year floodplain. One access road for the Substation/BESS Option C and the poles along the gen-tie line would be located within 100-year floodplains. The access road and poles would result in minor impacts to the FEMA 100-year floodplain. BMPs would be used during all construction and maintenance activities in accordance with standard operational procedures and any permit requirements. Impacts to water quality, streams, wetlands, aquatic life, and floodplains would be minor and insignificant, consistent with the requirements of Executive Order 11990 (Protection of Wetlands) and Executive Order 11988 (Floodplain Management), respectively.

No uncommon or rare plant or animal communities are present within the proposed project action areas, and the impacts to vegetation and wildlife would be insignificant. No plants or animals protected under the Endangered Species Act, or habitat suitable for these listed species are present on these sites; therefore, the requirements under Section 7 of that Act have been met. No state-listed protected species would be significantly affected.

Construction vehicles and equipment visible during construction activities would have a minor visual impact over the temporary construction period. During operation of the Solar Facility, moderate direct impacts in the immediate Project vicinity due to the presence and quantity of PV panels would occur. Impacts on residents on adjoining properties and visitors travelling on roadways in the vicinity would be minimized through the presence of existing natural screening buffers including forest areas. If existing buffers are not sufficient in shielding residents from the Solar Facility, MS Solar 7 would install privacy fence or shrubbery along the perimeter of the Project Site on a case-by-case basis.

Minor temporary noise impacts would be experienced during construction. Negligible adverse impacts from noise associated with operation and maintenance would occur.

Construction-related activities would result in minor and short-term impacts to air quality and climate change. With the use of BMPs, impacts would be minimal, temporary, and localized and would not be anticipated to result in violation of applicable ambient air quality standards or impact regional air quality. Once operational, the solar facility and associated BESS would allow for production and storage of green energy for long-term use, which would result in a beneficial effect on climate change.

Temporary and minor increases in GHG emissions would be expected during construction from operation of equipment. However, a net positive impact would occur from operation of nearly emissions-free power generation by the Solar Facility, reducing the need for power that would otherwise be generated by the combustion of fossil fuels.

No archaeological or architectural/historic resources eligible for inclusion on the National Register of Historic Places occur on or in the immediate vicinity of the proposed action areas. TVA has determined that there would be no effects on historic properties and the Mississippi State Historic Preservation Officer has concurred with this determination.

Workers in the proposed project areas would have an increased safety risk associated with the construction activities. However, because construction work has known hazards, standard practice is for contractors to establish and maintain health and safety plans in compliance with OSHA regulations. Such health and safety plans emphasize BMPs for site safety management to minimize potential risks to workers. No public health or safety hazards would be anticipated

as a result of operations. Overall, impacts to public health and safety in association with implementation of the proposed action would be considered temporary and minor.

Due to increases from workers commuting to and from the Project Site during construction, a minimal impact on traffic flow would be anticipated during construction. Negligible direct impacts and no indirect impacts on transportation would occur during operation.

Short-term beneficial economic impacts would result from construction, including the purchase of materials, equipment, and services and a temporary increase in employment, income, and population. There would be positive, long-term, direct impacts on economics and population from Project operation. The local tax base would increase from construction of the Solar Facility which would benefit Clay County, the City of West Point, and the Golden Triangle region of eastern Mississippi. There would not be disproportionately high or adverse direct or indirect impacts on minority or low-income populations.

The replacement of the batteries and ultimate decommissioning of the site would produce solid and hazardous waste in need of disposal. With the implementation of BMPs and compliance with the state and federal regulations, as well as the appropriate waste disposal requirements, no significant impacts associated with solid and/or hazardous waste are anticipated.

### **Public and Intergovernmental Review**

A draft of this EA was sent to local, state, and federal agencies and individuals who indicated an interest in the Project. TVA notified interested federally recognized Native American Tribes, elected officials, and other stakeholders that the draft EA was available for review and comment for a 30-day period. An electronic version of the document was posted on the TVA website where comments could also be submitted electronically. Public notices were published in local newspapers soliciting comments from other agencies, the general public, and any interested organizations.

Federal agencies that received the notification consisted of the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), U.S. Environmental Protection Agency (USEPA), and the U.S. Fish and Wildlife Service (USFWS). State and local agencies that received the notification consisted of the State of Mississippi, the Mississippi Department of Environment and Quality, Clay County, and other local officials. Tribes that received notification on the Project consisted of Absentee Shawnee Tribe of Indians of Oklahoma, Alabama-Coushatta Tribe of Texas, The Chickasaw Nation, The Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Eastern Shawnee Tribe of Oklahoma, Jena Band of Choctaw Indians, Kialegee Tribal Town, Mississippi Band of Choctaw Indians, The Muscogee (Creek) Nation, Shawnee Tribe, and Thlopthlocco Tribal Town.

The comment period closed May 20, 2022. TVA received comments from the USEPA and NRCS. Topics raised in these comments include the following: air quality impacts during construction, potential impacts to streams and wetlands, and prime farmland. TVA carefully reviewed all comments received on the draft EA and addressed them, as appropriate, in the final EA.

### **Mitigation**

MS Solar 7 would implement routine minimization and mitigation measures for resources potentially affected by the Project. These measures would be developed in conjunction with industry proven BMPs, requirements of regulatory permits, and adherence to the following plans:

- Storm Water Pollution Prevention Plan (SWPPP),
- Spill Prevention, Control, and Countermeasures (SPCC) Plan, and
- Unanticipated Discovery Plan for Cultural Resources.
- TVA would employ standard BMPs, as described in A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Construction and Maintenance Activities – Revision 3, TVA’s BMP manual (TVA 2017), to minimize erosion during construction, operation, and maintenance activities
- To minimize the introduction and spread of invasive species at the Project Site, access roads, and adjacent areas, TVA would follow standard operating procedures consistent with Executive Order (EO) 13112 (Invasive Species) for revegetating the areas with noninvasive plant species as defined by TVA (2017)
- 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 impacts to aquatic resources

MS Solar 7 would implement the following minimization and mitigation measures in relation to potentially affected resources:

- Land use and visual resources
  - Where existing natural buffers are not sufficient in shielding residents on adjoining parcels from the Solar Facility, MS Solar 7 would install a privacy fence or shrubbery along the perimeter of the Project Site
- Geology and soils:
  - Install silt fencing along the perimeter of areas that would be cleared, consistent with local and state stormwater regulations
  - Implement other soil stabilization and vegetation management measures to reduce the potential for soil erosion during site operations
  - Make an effort to balance cut-and-fill quantities to alleviate the transportation of soils off-site during construction
- Water resources:
  - Regarding revegetation and restoration following site disturbance, maintain stormwater BMPs in each area according to the TVA BMP Manual (TVA 2017) until stabilization (adequate vegetation regrowth) has been achieved
  - Avoid direct impacts to the maximum extent practicable on perennial and intermittent streams by maintaining a 25-foot riparian buffer at perennial and intermittent streams and wetlands in accordance with MDEQ NPDES General Construction Permit conditions
  - Avoid construction within floodplains
  - Road improvements would be done in such a manner that upstream flood elevations would not be increased by more than 1.0 foot
  - Construction would adhere to the TVA subclass review criteria for transmission line location in floodplains
  - Use only USEPA-registered and TVA approved herbicides in accordance with label directions designed
- Biological resources:
  - Plant or seed with noninvasive vegetation and include native and naturalized plant species to create beneficial habitat, reduce erosion, and limit the spread of invasive species

- Plant vegetation that benefits pollinator species to the extent practicable
- Install timer- and/or motion-activated downward facing security lighting to limit attracting wildlife, such as migratory birds and bats
- Avoid or minimize direct impacts on nesting and migratory birds and bats, as well as federally listed species, by clearing trees outside of the northern long-eared bat (NLEB) pup season (June 1–July 31)
- Install temporary construction fencing around sensitive natural resources that should be avoided
- Waste management:
  - Develop and implement a variety of plans and programs to ensure safe handling, storage, and use of hazardous materials
- Public and occupational health and safety:
  - Emphasize BMPs for site safety management to minimize potential risks to workers
  - Use dust mitigation activities such as watering dry exposed soils, covering open-body trucks, and establishing a speed limit to minimize fugitive dust
- Transportation:
  - Should traffic flow become a problem, consider implementation of staggered worker shifts during construction and a flag person along the roadside during deliveries that may coincide with heavy commute times to manage the flow of traffic near the Project Site

**Conclusion and Findings**

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of constructing, operating, and maintaining the Optimist Solar and BESS facility, and gen-tie line upgrade 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