

FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

POWER PURCHASE AGREEMENT – SR JACKSON SOLAR PHOTOVOLTAIC FACILITY

The Tennessee Valley Authority (TVA) proposes to enter a Power Purchase Agreement (PPA) with SR Jackson, LLC (SR Jackson), a wholly-owned subsidiary of Silicon Ranch Corporation (SRC), in Madison County, Tennessee. The proposed solar facility, known herein as the “SR Jackson solar facility,” would have direct current (DC) generating capacity of 2 megawatts (MW).

The proposed facility would occupy approximately 15 acres of the 44.4-acre property to be owned by SRC and leased to SR Jackson for the project. The proposed facility would have a direct current (DC) generating capacity of 2 megawatts (MW) and would interconnect to the Jackson Energy Authority (JEA) distribution network. The project would consist of multiple parallel rows of PV panels on single-axis tracking structures, DC to alternating current (AC) inverters, and one transformer. It would connect to the existing JEA-owned overhead 12.47-kilovolt (kV) Transmission Line along the southern boundary of the project site.

In its 2011 Integrated Resource Plan (IRP; TVA 2011) TVA established the goal of increasing its renewable energy generating capacity by 1,500 to 2,500 MW by 2020. TVA established the Renewable Standard Offer (RSO) program and the Solar Solutions Initiatives (SSI) pilot as two means of meeting this goal. Under the program and the pilot, TVA purchases energy at established terms and conditions (the “standard offer”) from operators of qualifying renewable energy-generating facilities. Qualifying facilities must be new, located within the TVA service area, and must generate electricity from specific technologies or fuels. Solar PV generation is one of the qualifying technologies. TVA’s 2015 IRP (TVA 2015) reinforced the continued expansion of renewable energy generating capacity, including the addition of between 175 and 800 MW (AC) of solar capacity by 2023. The SSI pilot was redesigned to allow for greater Local Power Company (LPC) involvement and more LPC-directed projects. The resulting pilot was named Distributed Solar Solutions (DSS). The proposed PPA with SR Jackson for the solar facility would be executed through the DSS pilot program and help TVA meet its need and goal for additional renewable generating capacity.

TVA must decide whether to execute the 20-year PPA with SR Jackson. If TVA executes the PPA, SR Jackson would construct and operate the 2-MW DC solar facility. The potential effects of TVA’s proposed action, including the effects of constructing and operating the solar facility and interconnecting with an existing JEA 12.47-kV Transmission Line, are described in an environmental assessment (EA), the results of which are incorporated herein by reference.

ALTERNATIVES

The subject EA evaluates two alternatives: the No Action Alternative and the Proposed Action Alternative. Under the No Action Alternative, environmental conditions in the project area would remain unchanged in the immediate future. The identified land would not be developed into a solar facility. No improvements would be made to the land. The approved 2 MW of solar capacity

would not be developed, limiting community access to solar energy options and choices. The No Action Alternative provides for a baseline of conditions against which the impacts of the Proposed Action Alternative can be measured.

Under the Proposed Action Alternative, TVA would execute the 20-year PPA with SR Jackson. To fulfill its obligations under the PPA, SR Jackson would construct and operate a 2-MW solar facility in Madison County. The proposed project would be developed on a 44.4-acre tract south of US 70/SR 1 (Airways Boulevard), east of the SR 223 intersection, and just north of the McKellar-Sipes Regional Airport.

The SR Jackson solar facility would result in the installation of approximately 5,500 individual monofacial and bifacial solar panels arranged over roughly 15 acres of the 44.4-acre area. The solar arrays would likely be supported by steel piles which would either be driven or screwed into the ground to a depth of 6 to 10 feet. On-site sedimentation basins would be shallow and, to the extent feasible, utilize the existing terrain without requiring extensive excavation. The PV panels would be connected with underground wiring placed in trenches. The trenches would be approximately 3 to 4 feet deep and 1 to 4 feet wide. The proposed project would include new on-site power pole connections to the existing JEA distribution line. The SR Jackson-owned connection would exit the site via an overhead transmission line and connect to an existing 12.47-kV transmission line.

Construction of the solar power facility generally requires site preparation (surveying and staking, removal of tall vegetation and small trees, light grading and clearing, installation of security fencing, installation of erosion control Best Management Practices (BMPs), and preparation of construction laydown areas) prior to solar array assembly and construction, which includes driving steel piles for the tracker support structures, installation of solar panels and electrical connections, and system testing and verification.

Within the 44.4-acre solar facility site, the 15-acre area containing the solar arrays and associated electrical infrastructure, with exception of the riser pole and other interconnection items, would be securely fenced with 7-foot-high chain-link fencing with three strands of barbed wire on the top throughout construction and the operation of the project. Construction activities would take approximately 4 months to complete using a crew of approximately 40 to 50 people at the peak of construction. Work would generally occur 6 days per week (Monday through Saturday) from 7 am to 3:30 pm. Additional hours could be necessary to make up schedule deficiencies or to complete critical construction activities. Solar panels would be manufactured off site and shipped to the site ready for installation. If concrete pads are required for the drive motors, they would be precast and brought to the site via flatbed truck. Once the majority of components are placed on their respective foundations and structures, electricians and other workers would run electrical cabling throughout the solar field.

During operation of the solar facility, minor disturbance could occur to soils. Routine maintenance would include periodic motor replacement, inverter air filter replacement, fence repair, vegetation control, and periodic array inspection, repairs, and maintenance. The Proposed Action Alternative would implement traditional mechanized landscaping using lawnmowers, weed eaters, etc. Traditional trimming and mowing would be performed periodically to maintain the vegetation at a height ranging from 6 inches to 2 feet. Selective use of herbicides may also be employed around

structures to control weeds. Products used would be limited to post-emergent herbicides and would be applied by a professional contractor.

The project site would not be staffed during operation; however, inspection and maintenance is required biannually and in the case of equipment failures. At these times, up to four people would be on site for up to four days. Biannual inspections would involve drawing transformer oil samples and identifying any physical damage to panels, wiring, and interconnection equipment. Vegetation on the site would be maintained to control growth and prevent shading of the PV panels or interference with the tracking mechanisms. Traditional trimming and mowing would be performed on a quarterly basis, depending on growth rate to maintain the vegetation. Selective use of spot herbicides may also be employed around structures to control any invasive weed outbreak. Precipitation in this region is adequate to remove dust and other debris from the PV panels while maintaining energy production; therefore, manual panel washing is not anticipated unless a specific issue is identified. The proposed project facility would be monitored remotely to identify any security or operational issues. If a problem is discovered during nonworking hours, a repair crew or law enforcement personnel would be contacted if an immediate response was warranted

The Proposed Action Alternative has been identified as the Preferred Alternative. Under this alternative, a PPA between TVA and SR Jackson would be executed, leading to SR Jackson's construction and operation of the proposed solar facility. The project would also help TVA's DSS pilot program meet its goal for adding additional renewable generating capacity.

IMPACTS ASSESSMENT

The potential impacts of the Proposed Action Alternative are described in detail in the EA. Construction activities would cause temporary increases in noise and traffic and affects to air quality and visual resources. Heightened noise during construction would occur, but impacts would be temporary. The project would result in minor direct and indirect geologic impacts from the development of the facility. The completed solar facility would change land use of the facility site from agricultural to industrial. However, the land has previously been identified for industrial grown in the One Jackson Civic Master Plan.

Visual impacts would slightly affect surrounding properties, the overall appearance of the solar panels would blend in with the immediate surrounding environment created by the airport and other industrial facilities. A glint and glare analysis conducted for the proposed facility indicated no glare occurrences for approaches to either of the runways at McKellar-Skypes Regional Airport, nor the airport's Air Traffic control Tower.

Because of the implementation of BMPs, impacts to groundwater are not expected. Steps taken in designing the site layout have avoided impacts to streams and wetlands. Because it would be located outside the 100-year floodplain, the Proposed Action would also be consistent with the requirements of Executive Order 11988, Floodplain Management, and would have no direct or indirect impacts on floodplains and their natural and beneficial values.

The project would result in indirect effects to the federally listed Indiana bat and the norther long-eared bad due to the loss of summer habitat. However, by limiting tree clearing to October 15 through March 31, when Federally listed bat species are likely not present on the landscape in

Tennessee, per TVA's programmatic consultation with the U.S. Fish and Wildlife Service (USFWS) on routine actions and federally listed bats in accordance with the Endangered Species Act (ESA) (TVA 2018). The project would not impact any other federally listed species or any Tennessee listed Rare Species. Additionally, the conversion of the existing agricultural field to a solar facility would not result in the creation of a Hazardous Wildlife Attractant as defined by the Federal Aviation Administration (FAA).

One property was identified as eligible for listing in the National Register of Historic Places (NRHP) background research and field surveys of the archaeological and historic architectural areas of potential effects (APEs). While current project plans would result in a visual effect to the property, the effect would not be adverse due to existing modern development within line of sight to the historic resources. TVA and the Tennessee State Historic Preservation Office concur with the recommendation in the cultural resources survey report that no historic properties would be affected by the construction and operation of the proposed solar facility. TVA received no objections from federally recognized Indian tribes on the Proposed Action Alternative.

Construction of the proposed facility could have minor beneficial direct, indirect, and cumulative impacts during construction, operation, and maintenance activities by the creation of local jobs, an increase in local tax base from an increase in assessed property value, and potential for expansion of future solar energy systems into the region. No direct or indirect environmental justice impacts are anticipated from the development of the solar facility.

PUBLIC AND INTERGOVERNMENTAL REVIEW

The Draft EA was released for public review and comment for 35 days beginning on December 18, 2018. The availability was posted on TVA's website. TVA notified local, state, and federal agencies and federally recognized tribes of its availability through their required consultations. Pursuant to Section 106 of the National Historic Preservation Act, TVA consulted with the Tennessee State Historic Preservation Officer (SHPO) requesting concurrence that the proposed action would have no effect on cultural resources. The SHPO concurred with this determination in a letter dated September 25, 2018. In addition, TVA received a response from the Chickasaw Nation with no objections to the proposed project.

MITIGATION

SR Jackson would implement routine best management practices listed in the EA to avoid or reduce minor adverse environmental effects from the construction of the projects as described in the EA. The following BMPs would be used to minimize impacts and restore areas disturbed during proposed project activities:

- Maintain a vegetative buffer between residences north of the proposed solar facility, as possible without providing impact to the project. This will be determined by final design and potential shading impacts.
- Comply with the terms of the SWPPP prepared as part of the NPDES permitting process and implement other routine BMPs, such as non-mechanical tree removal within surface water buffers, placement of silt fence and sediment traps along buffer edges, and proper vehicle maintenance to reduce the potential for adverse impacts to groundwater.

- The proposed layout would avoid direct impacts to aquatic features. It is anticipated that permitting activities related to Sections 401 and 404 of the CWA (33 U.S.C. § 1251 et seq.) will not be required.
- Limit tree clearing to October 15 through March 31, when Federally listed bat species are likely not present on the landscape in Tennessee, per TVA's programmatic consultation with the U.S. Fish and Wildlife Service (USFWS) on routine actions and federally listed bats in accordance with the Endangered Species Act (ESA) Section 7(a)(2) and completed in April 2018 (TVA 2018).

CONCLUSIONS AND FINDINGS

Based upon the analyses documented in the EA, TVA concludes that the Proposed Action Alternative of executing the PPA with SR Jackson, LLC and the subsequent construction and operation of the solar generating facility would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



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Date Signed