

FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

SR RIPLEY II SOLAR FACILITY LAUDERDALE COUNTY, TENNESSEE CEQ Tracking No. EAXX-455-00-000-1730464287

The Tennessee Valley Authority (TVA) entered into a 20-year power purchase agreement (PPA) with SR Ripley II, LLC, a wholly owned subsidiary of Silicon Ranch Corporation (SRC), in December 2022, to purchase the electric power generated by a proposed solar photovoltaic (PV) facility in Lauderdale County, Tennessee, subject to satisfactory completion of all applicable environmental reviews. The solar facility, known as SR Ripley II, would be owned by SRC and operated by SR Ripley II, LLC. The facility would have a generating capacity of 30 megawatts (MW) alternating current (AC). Ripley Power and Light would connect the solar facility to TVA's existing Ripley–Covington 161-kilovolt (kV) transmission line (TL) via a new 0.3-mile-long 34.5-kV dedicated TL from a proposed on-site switchgear to the existing on-site Ripley Power and Light East Industrial Park substation. TVA would install fiber-optic overhead ground wire (OPGW) on a 0.75-mile length of the Ripley–Covington 161-kV TL, on portions of the TL that are on site.

TVA produces or obtains electricity from a diverse portfolio of energy sources, including solar, hydroelectric, wind, biomass, fossil fuel, and nuclear. The 2019 Integrated Resource Plan (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 while reducing environmental impacts. The 2019 IRP recommends the expansion of solar generating capacity of up to 14,000 MW by 2038. With the demand for solar energy increasing, TVA has an expansion target of 10,000 MW of solar by 2035. Customer demand for cleaner energy prompted TVA to release a request for proposal (RFP) for renewable energy resources, the 2021 Renewable RFP. In response to this RFP, TVA received multiple proposals from solar developers, including SR Ripley II, LLC. The resulting PPAs, including the SR Ripley II, LLC PPA, would help TVA meet immediate needs for additional renewable generating capacity in response to customer demand and contribute to the fulfillment of the 10,000 MW of solar by 2035 target. The Proposed Action would provide cost-effective renewable energy consistent with the 2019 IRP and TVA goals.

The potential effects of the Proposed Action are described in the SR Ripley II Solar Facility Final Environmental Assessment (EA) which is incorporated by reference and referred to herein as the EA.

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, and the proposed solar PV facility in Lauderdale County would not be constructed. Existing conditions (e.g., land use, natural resources, visual resources, physical resources, and socioeconomics) in the Project area would not change as a result of the Proposed Action. TVA would continue to rely on other sources of generation as described in the 2019 IRP to ensure an adequate energy supply and to meet its goals for increased renewable energy and low greenhouse gas (GHG)-emitting generation.

Under the Proposed Action Alternative, TVA would execute the PPA to purchase the power generated by the proposed solar PV facility. SR Ripley II, LLC would construct, operate, and maintain a 30-MW AC single-axis tracking PV solar power facility on a 490-acre site located in Lauderdale County. Ripley Power and Light would connect the solar facility to TVA's existing Ripley–Covington 161-kV TL via a new a 0.3-mile-long 34.5-kV gen-tie line from a proposed on-site 0.5-acre switchgear to the existing on-site Ripley Power and Light substation. The proposed facility, associated interconnection components, access roads, streamside management zones (SMZs), and 200-foot shading buffer around solar panels would occupy approximately 377 acres of the 490-acre Project site. TVA would also install OPGW on a 0.75-mile length of the Ripley–Covington 161-kV TL, on portions of the TL that are on site.

The solar facility site would be prepared by surveying, staking, and installing about 42,000 feet of six-foot-tall chain-link security fencing and gates topped with three strands of barbed wire around the 11 large blocks of facility components and Project switchgear. Additional site preparation activities include establishing construction assembly areas, streamside management zones (SMZs), and erosion prevention and sediment control best management practices (BMPs).

Construction areas would be cleared of debris and tall vegetation, mowed, and lightly graded as needed. Solar arrays would be installed in north-south rows supported by steel piles driven into the ground. The solar arrays and inverters would be connected to transformers and the Project switchgear by buried electrical cables and a small maintenance building would be constructed onsite. Ripley Power and Light would connect the solar facility to the TVA transmission system via a new gen-tie line from the switchgear to the existing Ripley Power and Light substation. Associated with the interconnection, TVA would install OPGW on on-site portions of the Ripley–Covington 161-kV TL.

Subject to weather, construction activities would take approximately 12 months to complete using a crew of up to 200 workers sourced locally to the greatest extent possible. Work would generally occur six days a week (Monday through Saturday) during daylight hours. Night-time construction could be necessary to make up schedule deficiencies or to complete critical construction activities. These activities would require installation and use of temporary downward-facing, timer- and/or motion-activated lighting. Once construction is completed, the Project site would be revegetated using a mixture of non-invasive grass seeds.

During operations, the facility would be monitored remotely and periodically inspected and maintained by small groups of workers. Routine maintenance would include maintaining vegetation on the developed portions of the site and within a 200-foot buffer area to a height of

about 12 to 18 inches to prevent shading of the PV panels. Vegetation management would be conducted by mowing and potentially by sheep grazing.

Following the expiration of the 20-year PPA with TVA, SR Ripley II, LLC would assess whether to cease operations at the solar facility, or to replace equipment, if needed, and attempt to enter into a new PPA with TVA or make some other arrangement to sell the power. When operations cease, the facility would be decommissioned and dismantled, and the Project site would be restored per Project decommissioning requirements in coordination with the city of Ripley and Lauderdale County. Aboveground and below-ground Project components would be removed to a depth of at least three feet. Decommissioned components would be recycled to the maximum feasible extent, and other materials that cannot be recycled would be disposed of at an approved facility in accordance with federal, state, and local laws and regulations.

TVA's preferred alternative for fulfilling its purpose and need is the Proposed Action Alternative. The Proposed Action Alternative would generate renewable energy for TVA and its customers with only minor environmental impacts due to the implementation of BMPs and minimization and mitigation efforts. The Project would also result in some beneficial impacts. Implementation of the Project would help meet TVA's renewable energy goals and would help TVA meet customer-driven energy demands on the TVA system.

Impacts Assessment

The potential impacts of the Proposed Action Alternative are described in detail in the subject EA. Approximately 194 acres (40 percent) of the 490-acre Project site would be cleared and/or graded for the solar facility. An additional 159 acres would be cleared and maintained to implement a 200-foot shade reduction buffer around solar panels. These changes would cause minor adverse impacts to soils due to minor, localized increases in erosion and sedimentation. Construction activities would cause minor, short-term impacts to air quality, utilities, and visual resources, and temporary increases in noise and traffic. During operation minor long-term adverse impacts to visual resources would occur. Only minor, short-term adverse impacts are anticipated to geology, prime farmland, outdoor recreation areas, natural areas, waste management, and public occupational health and safety due to the nature of the Project; application of appropriate BMPs; and/or adherence to relevant local, state, and federal laws and regulations.

There may be brief local utility outages as the solar facility is brought on-line. If this or other outages on the Ripley–Covington 161-kV TL or other TLs are required, TVA would work with Ripley Power and Light to provide alternative means of providing electrical service to the area to avoid service interruptions. TVA would also make an effort to perform these outages at low-impact times, such as overnight, in order to maintain power service to Ripley Power and Light.

The proposed action would result in no direct impact to floodplains and their natural beneficial value. With the implementation of BMPs, indirect impacts to floodplains would be minor. Impacts to groundwater are expected to be minimal and only occur if wells are constructed. Minor permanent adverse impacts are anticipated to three intermittent streams due to stream crossings and 30 wet weather conveyances (WWCs) due to stream crossings and placement of Project

components. The three streams and 11 of the 30 WWCs mentioned above would also experience minor temporary impacts due to implementation of the road crossings. Access roads in the TL upgrade areas would require matting of one scrub/shrub wetland and temporary crossings over two intermittent streams and two WWCs. Potential moderate permanent adverse impacts to one forested wetland due to tree removal and conversion from forested to herbaceous (0.56 acre) would occur to prevent solar panel shading.

Long-term habitat loss would occur due to the clearing of approximately 51 acres of forest on the Project site and conversion to managed grassland. Impacts to herbaceous vegetation communities within the TL upgrade areas would be minor and temporary. These changes would result in effects to common wildlife. Aquatic life would experience minor impacts during construction. While the forested areas to be cleared are potential foraging habitat for bats listed under the Endangered Species Act, no listed bats were found during onsite surveys and TVA has determined that the Proposed Action may affect but is not likely to adversely affect listed species. No other federally listed endangered or threatened species would be affected, and the U.S. Fish and Wildlife Service (USFWS) concurred with TVA's determination in a letter dated September 24, 2024. The Project would result in minor and insignificant impacts to state-listed species and migratory birds.

TVA determined that the Project would have no adverse effects on any cultural resources listed or determined eligible for listing in the National Register of Historic Places. Pursuant to the National Historic Preservation Act, TVA consulted with the Tennessee Historical Commission and interested federally recognized Indian tribes regarding its determination. TVA also consulted with federally recognized Indian tribes regarding properties of religious or cultural importance to their tribe. TVA did not receive any concerns from consulting tribes. On March 27, 2024, Tennessee Historical Commission concurred that the Project would not adversely affect any historic properties.

Construction of the proposed facility would have short-term beneficial economic impacts during the approximately 12-month construction period. These benefits would include the purchase of materials, equipment, and services and a temporary increase in employment, income, and population. Minor adverse impacts would occur to the local agricultural economy due to the removal of 344 acres from agricultural row cropping for the duration of the Project. Beneficial, long-term direct impacts to the local economy from Project operations would occur as the local tax base would increase from construction of the solar facility. Direct and indirect impacts that occur due to the Project could have negligible to minor impacts on minority and low-income communities with environmental justice (EJ) concerns. Most impacts would occur during the 12-month construction period. Off-site impacts would be minor or mitigated. As such, no disproportionate or adverse direct or indirect impacts on communities with EJ concerns due to human health or environmental effects are expected to result from the Proposed Action Alternative. In addition, the Project would have minor beneficial impacts to employment and income levels in the local region that could benefit nearby communities with EJ concerns.

The Project would result in minor, temporary direct adverse impacts to land use due to the conversion of the Project site from agricultural to industrial during construction and operation. 344 acres of cropland would be removed from agricultural use during the lifetime of the Project. Some agricultural use may continue to take place on 86 acres of the Project site. With decommissioning of the Project, removal of Project components, and site reclamation, the Project site could return to other agricultural uses.

Visual impacts during construction and operation of the Project components would be minor as most of the Project site is not visible from nearby viewpoints. Noise impacts would be minor to moderate during construction, particularly during the three-month period when pile driving would occur, but minimal to negligible during operations due to the distance of noise receptors from noise-producing Project components. Noise-sensitive receptors near the TL upgrade areas would temporarily experience heightened noise, primarily during the installation of OPGW by helicopter. Minor impacts to air quality would occur during construction, primarily as a result of an increase in vehicular emissions in the vicinity, and zero to minimal negative impacts to air quality or GHG emissions would occur during operations. Offsetting beneficial effects to GHG emissions would occur during operations, as the emissions-free power generated by the solar facility would help reduce the need for new power that would otherwise be generated by the combustion of fossil fuels.

Minor cumulative impacts could occur to land use, soils, groundwater, threatened and endangered species, noise, and communities with EJ concerns.

Public and Agency Review

In 2023, SRC began working with the city of Ripley and Lauderdale County to introduce the Project to local officials and assist with drafting solar ordinances for the city. SRC mailed informational post cards to adjacent landowners in the summer of 2023, and the city held public hearings around the adoption of new solar ordinances for the eventual vote in December 2023. In April 2024, SRC requested annexation and rezoning of project parcels and attended public hearings related to the annexation and rezoning of the project parcels that support eventual development of the site. The project parcels were rezoned after public hearings and unanimous approval in May 2024. SRC intends to host community meetings to provide further information if deemed necessary based on feedback from the public comment period or as requested by local municipal leaders.

On July 15, 2024, TVA issued the draft subject EA for public and agency review and comment. TVA notified the public of the availability of the draft EA via an advertisement in newspapers that serve the Lauderdale County area and postcards to residents within one mile of the Project site. TVA also notified appropriate local, state, and federal agencies and federally recognized tribes of the availability of the draft EA and posted the draft EA on its webpage (www.tva.gov/nepa) with information about how to submit comments. During the 30-day public review and comment period of the draft EA, a total of 14 comment submissions were received from individuals, organizations, and agencies.

Mitigation

SR Ripley II, LLC and TVA would implement the following minimization and mitigation measures in relation to resources potentially affected by the construction and operation of the Project:

Standard Practices and Routine Measures

- Geology and Paleontology
 - Should paleontological resources be exposed during site construction or operation activities, a paleontological expert would be consulted to evaluate the nature of the paleontological resources, recover these resources, analyze the potential for additional impacts, and develop and implement a recovery plan/mitigation strategy.
- Soils
 - Install silt fences along the perimeter of vegetation-cleared areas;
 - Implement other soil stabilization and vegetation management measures to reduce the potential for soil erosion during site operations; and
 - Balance cut-and-fill quantities to alleviate the transportation of soil off-site during construction.
- Water resources
 - Comply with the terms of the Stormwater Pollution Prevention Plan prepared as part of the National Pollutant Discharge Elimination System permitting process;
 - Comply with the terms of Tennessee Department of Environment and Conservation Aquatic Resource Alteration Permit and U.S. Army Corps of Engineers Section 401 and 404 permits and associated mitigation, and compensatory mitigation per Executive Order 11990, Protection of Wetlands, as applicable;
 - Use BMPs for controlling soil erosion and runoff, such as the use of 50-foot SMZs surrounding intermittent and perennial streams and wetlands according to their rating as defined by TVA's *A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Construction and Maintenance Activities*: Standard Stream Protection (Category A), Protection of Important Streams, Springs, and Sinkholes (Category B), or Protection of Unique Habitat (Category C);
 - Implement other routine BMPs as necessary, such as non-mechanical tree removal within SMZs and placement of silt fences and sediment traps along SMZ edges;
 - Use only U.S. Environmental Protection Agency-registered and TVA-approved pesticides per label directions designed to restrict applications near receiving waters and to prevent unacceptable aquatic impacts in areas requiring chemical treatment; and
 - Ensure construction and maintenance activities occur during dry periods as much as possible.

- Biological resources
 - Revegetate with non-invasive grasses to reintroduce habitat, reduce erosion, and limit the spread of invasive species (per Executive Order 13112, Invasive Species);
 - Minimize direct impacts to most migratory birds and federally listed bats by following appropriate TVA BMPs when possible;
 - Follow USFWS recommendations regarding biological resources;
 - Use only U.S. Environmental Protection Agency-registered and TVA-approved pesticides in accordance with label directions designed in part to restrict applications near receiving waters and to prevent unacceptable aquatic impacts in areas requiring chemical treatment;
 - Coordinate with U.S. Department of Agriculture and/or USFWS if active osprey and eagle nests are identified during aerial nest surveys of the TL upgrade areas to develop avoidance and minimization measures and ensure compliance under federal law prior to commencement of construction activities; and
 - Implement Avian Power Line Interaction Committee guidelines to minimize impacts to birds during the TL upgrade activities.
- Noise
 - Limit construction activities primarily to daytime hours and ensure that heavy equipment, machinery, and vehicles utilized at the Project site meet all federal, state, and local noise requirements;
 - Pile-driving within 5,322 feet of the nearest residences would be scheduled during daylight hours Monday through Friday to minimize impacts to the residences; and
 - Pile-driving within 4,976 feet of the nearest church would be scheduled outside of church services.
- Air quality and climate change
 - Comply with local ordinances or burn permits and avoid burning on days air quality alerts have been issued, as much as feasible, if burning of vegetative debris is required, and use BMPs such as periodic watering, covering open-body trucks, establishing a speed limit to mitigate fugitive dust, and maintain equipment in good condition.
- Waste management
 - Develop and implement a variety of plans and programs to ensure safe handling, storage, and use of hazardous materials; and
 - Submit notification of demolition to the Tennessee Division of Air Pollution Control, report the presence of regulated asbestos-containing material to the Tennessee Division of Air Pollution Control through the notification process using Tennessee Department of Environment and Conservation form CN-1055 (Notification of Demolition and/or Asbestos Renovation), and handle and dispose of regulated asbestos-containing material in accordance with applicable regulations.
- Public and occupational health and safety
 - Implement BMPs for site safety management to minimize potential risks to workers.
- Transportation

- When warranted, post a flag person during heavy commute periods, prioritize access for local residents, and implement staggered work shifts during daylight hours to manage construction traffic flow near the Project site; and
- Obtain a Tennessee Department of Transportation Commercial Driveway Permit for Project-related driveways in use during facility operations.
- Environmental justice
 - TVA sent postcard notification of the availability of the draft EA to residences within one mile of the Project area.

Mitigation Measures and Environmental Commitments

- Cultural resources
 - Exclude two archaeological sites identified within the Project site from development or disturbance, in accordance with an Avoidance Agreement between TVA and SR Ripley II, LLC, which is included in Appendix D of the EA.

Conclusions and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of construction and operation of the solar generating facility and TVA's purchase of the electric output pursuant to the PPA with SR Ripley II, LLC would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



Dawn Booker
Senior Manager, NEPA Compliance
Environment & Sustainability

November 21, 2024

Date Signed