FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY

ADAMSVILLE SOLAR
HARDIN AND MCNAIRY COUNTIES, TENNESSEE

The Tennessee Valley Authority (TVA) has entered into a 20-year power purchase agreement (PPA) with SR Adamsville, LLC (Adamsville Solar), a wholly owned subsidiary of Silicon Ranch Corporation (SRC), to purchase the power generated by Adamsville Solar (Project) in Hardin and McNairy Counties, Tennessee, subject to satisfactory completion of all applicable environmental reviews.

The proposed Project would generate up to 25 megawatts (MW) alternating current (AC) generating capacity at the Point of Interconnection and would impact approximately 215.5 acres of an approximately 295-acre tract located approximately 1.5 miles northeast of the City of Adamsville, McNairy County, Tennessee. While the design is in the process of being finalized, the conceptual plan includes approximately 74,682 individual monocrystalline module photovoltaic (PV) panels.

Adamsville Solar would build a switchyard on the Project Site to transmit the power to the existing North Adamsville 161-kilovolt (kV) substation via the existing local power company Pickwick Electric Cooperative's (PEC's) existing Transmission Line that terminates at the North Adamsville substation. The substation would transmit the power to the TVA grid.

In June 2019, TVA completed an Integrated Resource Plan (IRP) and associated Environmental Impact Statement. 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 while reducing environmental impacts. The 2019 IRP anticipates growth of solar in all scenarios analyzed, with most scenarios anticipating 5,000-8,000 MW and one anticipating up to 14,000 MW. TVA began the process of updating its IRP and will issue an updated plan in 2024. With the demand for solar energy increasing, TVA has an expansion target of 10,000 MW of solar by 2035.

Alternatives

The Environmental Assessment (EA) evaluates two alternatives: The No Action Alternative and the Proposed Action Alternative (Proposed Action). Under the No Action Alternative, TVA would not purchase power through a 20-year PPA with Adamsville Solar. Existing conditions (e.g., land use, natural and water resources, visual resources, physical resources, and socioeconomics) at the Project Site would not change as a result of selecting the No Action Alternative and agricultural activities would likely continue. TVA would continue to rely on other sources of generation described in the 2019 IRP to ensure an adequate energy supply and to meet its goals for increased renewable and low greenhouse gas (GHG)-emitting generation.

Under the Proposed Action, Adamsville Solar would construct and operate the proposed 25 MW AC solar facility and PEC would be responsible for the connection to the TVA power system. The Proposed Action includes installing the solar panels on single-axis tracker structures supported by steel pilings and connecting them with underground cables.

The arrays would contain approximately 40 0.8 MW power inverters and approximately 753 13-string, 177 10-string, and 148 7-string trackers. Buried electrical cables would connect the rows of PV panels to four 4.00 MVA transformers onsite. Site preparation would involve surveying and staking, removing tall vegetation and small trees, grading and clearing, installing the security fence, implementing erosion control Best Management Practices (BMPs), and preparing construction laydown areas.

Approximately 70 to 100 workers would be employed during construction of the solar facility, lasting approximately 8-12 months. Work would occur six days a week (Monday through Saturday) from 7:00 am to 5:00 pm. Additional hours could be necessary to make up schedule deficiencies or to complete critical construction activities. Once construction is complete, staff presence at the site would be minimal.

Operations and Decommissioning

During operation of the solar facility, no major physical disturbance would occur. Routine maintenance would include periodic motor replacement, inverter air filter replacement, fence repair, vegetation control, and periodic array inspection, repairs, and maintenance. Traditional trimming and mowing would be performed periodically (about four mowing events per year) to maintain the vegetation at a height ranging from six inches to two feet. Selective use of herbicides may also be employed around structures to control weeds. Products would be used per state and federal regulations. To minimize any possibility of runoff or drift when using herbicides, care would be taken to follow manufacturer's directions and avoid herbicide application prior to predicted rainfall events or high winds.

Following the expiration of the 20-year PPA with TVA, Adamsville Solar would reassess the site operation and determine whether to cease operation or attempt to enter into a new PPA or another arrangement. If TVA or another entity is willing to enter into such an agreement, the Project could continue operating. If no commercial arrangement is possible, and if TVA opts not to exercise its option for purchase at the end of the 20-year term, the facilities would be decommissioned and dismantled, and the Project Site restored.

In general, most decommissioned equipment and materials would be recycled. Key components, including the Series 6 or 7 solar modules to be used by Adamsville Solar, realize high recycling rates at the component supplier's state-of-the-art recycling facilities. With respect to the Series 6 or 7 solar modules, up to 90 percent of the semiconductor material can be reused in new modules and 90 percent of the glass can be reused in new glass products. Materials that cannot be recycled would be disposed of at approved facilities in accordance with local, state, and federal laws and regulations.

Impacts Assessment

The Adamsville Solar EA describes the potential impacts and mitigation of the Proposed Action in detail. Up to 1.33 acres of forested wetlands could be permanently impacted if the SRC project design team cannot design the layout to avoid these impacts. Other than the possible wetland impacts, there would be some minor, temporary impacts during construction, but they would not result in any long-term or permanent adverse impacts to any of the resources described below or to anyone living near the Project Site.

Land Use

Implementing the Proposed Action Alternative would result in minor direct adverse impacts to the Project Site. Land use on the Project Site would change from agricultural and forested to industrial. As a relatively small portion of the extensive agricultural and forested land in the vicinity would be lost, the Proposed Action would have an overall minor adverse impact.

Geology, Soils and Prime Farmland

During construction there would be minor direct impacts to geology resulting from placement of the steel piles that support the solar arrays. Hazards resulting from geological conditions would be minor because the Project Site is in a relatively stable geologic setting.

Minor disturbance to soils would occur during operation of the Proposed Action Alternative. The creation of new impervious surfaces, in the form of panel footings and the foundations for the inverter stations and switchyard, would result in a minor increase in stormwater runoff and potentially increase soil erosion. The use of BMPs such as soil erosion and sediment control measures would minimize the potential for increased soil erosion and runoff. Following construction, implementation of soil stabilization and vegetation management measures would reduce the potential for erosion impacts during site operations. While in operation, adverse impacts to soils would be offset by beneficial effects of vegetation management.

No permanent or irreversible conversion of prime farmland would occur. While agricultural production would not be possible where panels are placed on the Project Site, adhering to BMPs during construction and operation of the solar facility, including installing erosion control devices (ECDs), would preserve topsoil and limit erosion, resulting in negligible impacts to prime farmland. If the solar panels were removed at the end of the 20-year PPA, the prime farmland could be returned to agricultural production.

Water Resources

Groundwater

Direct and indirect impacts on local aquifers and groundwater are not anticipated due to the limited ground disturbance required for initial construction, operation, maintenance, or decommissioning and closure. During construction, hazardous materials would be onsite that could potentially contaminate groundwater resources, including petroleum products for fuel and lubrication of construction equipment, hydraulic fluids, and various other chemicals commonly used for general construction. Appropriate BMPs would be followed, and a Spill Prevention, Countermeasure and Control (SPCC) Plan would be prepared to minimize the potential for leaks or spills to occur and provide countermeasures for spill response.

Surface Water

Construction and operation of Adamsville Solar would not impact any jurisdictional streams or ponds except for stream crossings based on the current project layout. No panels or other above-ground structures are expected to impact any state or federal jurisdictional streams or ponds. These areas would be avoided during construction to the greatest extent feasible, although minor work would be expected to occur within the buffer zones. Several interior access roads will cross

jurisdictional streams (via a culvert) and will require a general Aquatic Resource Alteration Permit (ARAP) permit from the Tennessee Department of Environment and Conservation (TDEC) and possibly need authorization from the U.S. Army Corps of Engineers (USACE).

During construction, runoff of sediment and pollutants could temporarily impact surface water quality on the Project Site. The use of BMPs for controlling soil erosion and runoff would minimize these potential impacts to surface water. Additionally, construction of onsite stormwater detention basins would allow sediments to settle out prior to release.

Floodplains

Because there are no mapped or unmapped floodplains within the Project Site, and the one unmapped perennial stream (STR-2) identified within the Project Site would be protected by a 60-foot buffer, there would be no impacts to floodplains by implementing the Proposed Action.

Wetlands

During all stages of the design process, efforts have been made to avoid and minimize impacts to wetlands to the greatest extent practicable. The current layout shows potentially up to 1.33 acres of forested wetland impact (tree removal leaving roots in place) in Wetlands 1, 2, 4a, 4b, and 6 would be needed to reduce shading of the panels. The amount of impact may be further reduced as the final plans are prepared. Any wetland impacts would be subject to the terms and conditions of a general or individual ARAP from TDEC pursuant to Section 401 of the Clean Water Act (CWA). Based on the findings of USACE's Approved Jurisdictional Determination (AJD), a USACE permit pursuant to Section 404 of the CWA (33 U.S.C. § 1251 et seq.) would not be required for wetland impacts under the current layout. SRC would obtain the necessary permit(s) and follow the permit requirements and compensatory mitigation measures to minimize impacts to wetlands before construction begins. Additionally, with implementation of appropriate BMPs, impacts to wetlands would be further minimized during construction.

While operational, there is a potential for beneficial impacts to wetlands within the Project Site due to the reduction in annual agriculture activities and applications of pesticides and fertilizer within the Project Site.

State and Federal Concurrence

On March 6, 2023, TDEC released its official concurrence letter for the Project Site. TDEC concurred with the findings of the Hydrologic Determination Report, with the exception that all the ponds are jurisdictional to the state due to potential connection to groundwater. The USACE AJD, issued on February 8, 2024, concurred with the Preliminary Jurisdictional Determination for streams, wetlands, and ponds except for a determination that one ephemeral stream and one wetland would be jurisdictional rather than non-jurisdictional.

Biological Resources

Vegetation

Under the proposed action, approximately 99.5 acres of agricultural land and 116 acres of forested land of the 295-acre Project Site would be required for the site's development. Considering the large amount of similar vegetation types in the area, both regionally and locally,

clearing the existing vegetation would be regarded as minimal and insignificant impacts. Disturbed areas would be seeded post-construction using a mixture of certified weed-free, low-growing grass seed obtained from a reputable seed dealer and in compliance with the requirements established by the local office of the Natural Resources Conservation Service (NRCS). With revegetation of native or noninvasive species, impacts would not be expected to be significant.

Wildlife

Overall, direct impacts on wildlife would be minor. Wildlife present at the time of construction would be impacted, particularly when heavy machinery is used for vegetation clearing and driving piles as it would displace any wildlife currently using the area. Mobile species would be able to leave the area and would not be impacted. Direct effects to some individuals may occur if those individuals are immobile during the time of habitat removal. Upon completion of construction, the site would be revegetated using a mixture of certified weed-free, low-growing native or non-invasive grass seed. Those animals able to use early successional habitats could return to the site upon completion of the Project if they are able to access the new habitats. No migratory bird species of conservation concern were observed or listed by the U.S. Fish and Wildlife Service (USFWS) within the project area. Approximately 47 acres of habitat is not proposed for development and would be available for wildlife use.

Threatened and Endangered Species

Twenty-one federally-listed species currently classified as either threatened (three species), endangered (thirteen species), under review for listing (two species), a candidate species for listing (one species), proposed for listing (one species), and experimental population, non-essential (one species) have the potential to occur within the Project Site in Hardin and McNairy Counties. Only the monarch butterfly, a candidate species for listing, was observed on the Project Site. No federally designated critical habitats for these species are present within or adjacent to the Project action area; therefore, no adverse modification of critical habitats would occur.

Roosting habitat for three federally protected mammals, the endangered gray bat and northern long-eared bat (NLEB) and the candidate tricolored bat (TCB), is present within the Project Site. No individuals of the three species were collected during the mist-net survey conducted from May 20-24, 2023, in accordance with federal survey guidelines. Of the approximately 148.7 acres of potential summer roosting habitat, approximately 16.2 acres of good, 18.9 acres of marginal, and 34.2 acres of poor bat habitat will be removed. Wetlands, streams, and forested areas offer suitable foraging habitat for these species and, except for a possible 1.33 acres of wetland impact, would not be impacted by constructing the Project. SRC is working to reduce this to no wetland impacts. Tree clearing would be conducted only during the winter window (October 15 – March 31) when federally and state listed bats, as well as the TCB, are not present. Thus, implementing the Proposed Action will not adversely impact these species.

BMPs would be used around all streams and wetlands not proposed for impact to minimize potential impacts to bat foraging habitats. On December 19, 2023, in Section 7 consultation under the Endangered Species Act, the USFWS concurred with TVA's determination that proposed actions "may affect but are not likely to adversely affect" the NLEB and gray bat and not jeopardize the continued existence of the TCB, whooping crane, alligator snapping turtle, and monarch butterfly.

Visual Resources

Construction of the Project would convert farmland to commercial/industrial land use and alter the visual character of the Project Site. During construction there would be temporary visual impacts from the construction machinery. When operational, the panels would be visible from the roads that border the Project. Adamsville Solar would coordinate with Hardin and McNairy Counties to determine the appropriate screening measures necessary to further minimize any potential visual impacts from the Project.

Noise

Construction noise would cause temporary and short-term adverse impacts to the ambient sound environment near the Project Site. Nearby residents could experience elevated noise caused by construction equipment. Construction equipment typically results in a maximum noise level of 80-90 dBA, dropping to 71-81 dBA at 300 feet, and 50-60 dBA at 1,000 feet. Most construction-related noise such as delivery trucks, dump trucks, water trucks, service trucks, bulldozers, chain saws, bush hogs, and other large mowers for tree clearing would remain under 65 dBA for nearby residences due to their distance from the sound source. Additionally, most of the proposed equipment would not be operating on the site for the entire construction period or at one time but would be phased in and out based on Project progress.

Following completion of the solar facility, the ambient sound environment is anticipated to return to existing noise levels or below by eliminating some of the seasonal use of agricultural equipment. The proposed inverters would produce minimal noise for residences more than 1,000 feet from the proposed inverters. A typical inverter, such as a Power Electronics 3510kVA model, has noise levels of less than 79 dB measured at 1 meter from the back of the unit. Maintenance activities, primarily mowing, would result in noise periodically; however, this noise would be similar to existing noises near the Project Site.

Air Quality and Climate Change

Under the Proposed Action Alternative, minor impacts to air quality would occur during the construction of the solar facility. Only minimal air impacts would be expected, as construction might result in localized dust and fumes from equipment. The construction would involve using diesel-powered machinery and thereby create small amounts of airborne dust and debris. Internal combustion engines' emissions associated with diesel fuels would generate local emissions, including carbon monoxide, nitric oxide, and sulfur dioxide during construction (an increase of GHG during construction). Also, during clearing, trees may be burned and result in a minor increase in GHG emissions. The impacts on air quality would be minimal and short-term.

The operation of the solar facility would result in negligible impacts due to maintenance activities such as facility inspections and periodic mowing. However, a minor reduction in new GHG emissions is expected as the emissions-free power generated by the solar facility would reduce the need for power that would otherwise be generated in part by fossil fuels. This reduction would result in minor beneficial impacts to air quality.

Cultural Resources

The Proposed Action Alternative would not adversely affect listed or potentially eligible National Register of Historic Places sites where the panels or substation are installed. TVA consulted with the State Historic Preservation Office (SHPO) and federally recognized Indian tribes with an interest in the area with respect to these findings of both the archaeological and architectural surveys. TVA received concurrence from the SHPO in a letter dated June 26, 2023, that no historic properties eligible for listing in the National Register of Historic Places will be affected by implementing the Proposed Action. Should previously undiscovered cultural resources be identified during Project Site construction or operations, a Secretary of the Interior qualified archaeologist and the SHPO would be consulted before any further action is taken. Of the Tribes who were consulted, TVA received one response from the Chickasaw Nation with no objections to the proposed undertaking.

Natural Areas and Recreation

Natural areas are managed areas such as National Wildlife Refuges, Natural Areas listed by TDEC, Wildlife Management Areas (WMA) listed by the Tennessee Wildlife Resource Agency, ecologically significant sites, and river segments listed in the Nationwide Rivers Inventory. Within a 5-mile radius of the Project Site, the only natural or recreation area is Beason Creek Wildlife Management Area (BCWMA) located approximately 3 miles from the Project Site. This distance is sufficient that the proposed action would not affect BCWMA.

Utilities

Utilities include electrical service, natural gas, water supply, and communications. Electrical service to the Project Site is available from PEC. A service drop would be installed during construction to provide construction power. Given the low-level of electric demand during construction and operation, no changes to the PEC distribution system would be expected, and there would be no impact to the local utility or its customers. No impacts to other utilities would be anticipated as a result of the implementation of the Proposed Action.

Waste Management

During construction, operation and maintenance, and decommissioning, small amounts of hazardous waste would be generated. Hazardous waste that may be generated during construction and decommissioning includes hydraulic fluids, used oil, paint, and paint thinner, other petroleum-based fluids, and any materials saturated with these fluids. To the extent possible, hazardous waste would be recycled. BMPs would be implemented to minimize the potential of a spill and to instruct onsite workers on how to contain and clean up spills.

Non-hazardous solid waste including worn or broken metal and machine parts, defective or broken electrical materials, other scrap metal and plastic, broken down module boxes, empty containers, paper, glass, and other miscellaneous solid waste would be generated throughout all phases of the proposed Project. Waste would be disposed of utilizing contracted refuse collection and recycling services. Bulk chemicals would be kept in storage tanks or returnable delivery containers.

Overall, by implementing BMPs, minimal direct impacts from hazardous and non-hazardous waste are anticipated. Additionally, no indirect impacts from hazardous or non-hazardous waste are anticipated.

***Public and Occupational Health and* Safety**

Adamsville Solar will implement BMPs to reduce risk to public and occupational health and safety during construction, operation, and decommissioning. Under the Proposed Action Alternative, workers on the Project Site would have an increased safety risk during construction. However, standard construction site practice includes the establishment and maintenance of health and safety plans to comply with Occupational Safety and Health Administration (OSHA) regulations. A SPCC plan would be developed and implemented to minimize the potential of a spill and to provide detailed instructions for onsite personnel on how to contain and clean up any potential spills.

The Project is not anticipated to cause electromagnetic interference at levels that would impact nearby residents. Adamsville Solar intends to design, construct, and operate the electrical systems of the proposed Project using standard industry practices with sufficient setbacks to reduce or eliminate electromagnetic frequency and interference exposure to adjacent property owners.

Transportation

No long-term or permanent impacts to transportation are anticipated from the proposed Project. Traffic flow around the work site would be heaviest at the beginning of the workday, at lunch, and at the end of the workday resulting in minor temporary impacts. The proposed solar facility would not be staffed during operation but would be inspected weekly. Maintenance would be required quarterly for equipment failures and would require minimal personnel. Therefore, the operation of the solar facility would not have a noticeable impact on local roadways.

Socioeconomics

Approximately 70-100 workers would be employed during construction, lasting approximately 8-12 months. Construction of the proposed facility could have short-term beneficial economic impacts due to the purchase of materials, equipment, and services and a temporary increase in employment, income, and population. Operation of the facility would not increase local employment as no workers would be needed for day-to-day operation of the solar facility.

Overall, socioeconomic impacts for the operation of the Project are anticipated to be positive and long-term, although small relative to the total economy of the region. Although it is too early to quantify, the Project would benefit the local tax base through the increased property taxes due to site improvements.

Environmental Justice

The results of the environmental justice (EJ) analysis indicate there is a low-income population living near the Project Site, but no minority populations are present. With none of the panels visible from the public roads, and only partially panel visibility for one residence, the visual impacts would not adversely impact any low-income population near the Project Site

Constructing the Project does not result in a long-term increase to air pollution, the release of GHGs, noise, hazardous materials, or traffic. The Project would not result in a permanent change to the socioeconomics of the area or create undo impacts on solid waste and utilities. No recognized natural areas or recreational facilities will be impacted. The Project would result in minor impacts to surface and groundwater, biological, water, and cultural resources; however, these impacts are offset by buffers protecting the resources and would not have an adverse impact on any low-income population.

Persons living near to the Project Site, including the low-income population, may experience short-term impacts from an increase in traffic and noise during construction along with minor short-term direct and indirect air quality impacts resulting from localized dust and exhaust fumes from equipment during construction, but these impacts will end once construction is completed. Some minor long-term beneficial impact may result from the decreased use of pesticides and fertilizers on farmland that is converted to solar panels.

None of the impacts mentioned above rises to a level where they would create human health or environmental impacts that meet or exceeds the factors Council on Environmental Quality (CEQ) uses to determine when a minority and/or low-income population would be disproportionately and adversely impacted by the Project.

Cumulative Impacts

The 2022 CEQ's NEPA regulations define cumulative effects as "effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time." The desktop research did not identify any past, present, or foreseeable future local projects that could combine with the Proposed Action to cause cumulative impacts that may significantly affect the environment.

Public and Intergovernmental Review

TVA announced the proposed Adamsville Solar Project through various means, providing opportunity for public comment. Federal, state, and local agencies, interested federally recognized Native American Tribes, elected officials, and other stakeholders were sent notification announcing the availability of the draft EA for review and comment for a 30-day period.

During the 30-day public review and comment period of the draft EA, TVA received five responses in support of the project from members of the public and letters from the U.S. Environmental Protection Agency (USEPA) and Tennessee Department of Environment and Conservation (TDEC). The comments and responses are included as Appendix A of the EA.

Mitigation Measures

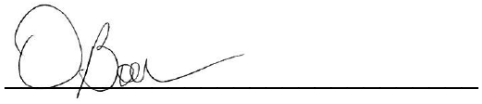
Adamsville Solar would implement the following minimization and mitigation measures in relation to resources potentially affected by the proposed Project:

- Maintain existing landscape and aquatic resource buffers.

- Comply with the terms of the Stormwater Pollution Prevention Plan (SWPPP) prepared as part of the National Pollutant Discharge Elimination System permitting process and implement other routine BMPs, such as non-mechanical tree removal within surface waters and buffers, placement of silt fences and sediment traps along buffer edges, and proper vehicle maintenance and compliance with SPCC to reduce the potential for adverse impacts to groundwater.
- Design of the final layout would minimize direct and indirect impacts on aquatic features.
- Comply with the conditions of the TDEC Section 401 and USACE 404 of the CWA (33 U.S.C. § 1251 et seq.) permits, as applicable, including any required compensatory mitigation.
- SRC would consider staggering work shifts to space out traffic flow to and from the Project Site should traffic flow related to the Project become a problem during construction.
- Any manual tree cutting in wetlands will leave the stumps in place to preserve hydric soils.
- If hauled offsite for disposal, excavated material and debris when the facility is decommissioned and dismantled would be spoiled outside 100-year floodways.
- Tree removal will only occur from October 15 to March 31.

Conclusions and Findings

Based upon the analyses documented in the EA, TVA concludes that the Proposed Action Alternative of the construction and operation of the solar generating facility and TVA's purchase of the electric output pursuant to the PPA with Adamsville Solar would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



February 14, 2024

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Date Signed