

## FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

### POWER PURCHASE AGREEMENT – SELMER NORTH I SOLAR PROJECT

The Tennessee Valley Authority (TVA) proposes to execute a 20-year power purchase agreement (PPA) through its Renewable Standard Offer (RSO) program with Selmer North I, LLC, an affiliate of Silicon Ranch Corporation (SRC), for electric power generated by the 20-megawatt (direct current) Selmer North I Solar Project. The proposed photovoltaic (PV) solar facility is near the town of Selmer in McNairy County, Tennessee. It would be connected to the TVA transmission network through an interconnection to a nearby Pickwick Electric Cooperative power line.

TVA produces or obtains electricity from a diverse portfolio of energy sources including nuclear, fossil, hydro, solar, wind, and biomass. In 2011, TVA completed an Integrated Resource Plan (IRP) and associated environmental impact statement that identified the resources TVA would use to meet the energy needs of the TVA region over the 20-year planning period. Cost-effective renewable energy, including energy generated by solar PV, is one of the energy resources recommended in the IRP. Since 2011, TVA has undertaken several efforts to expand the contribution of renewable energy in its generation portfolio, including the establishment of the RSO program. The recently completed 2015 IRP reiterated the continued expansion of TVA's use of renewable energy. The proposed PPA would help meet this need and the Selmer North I solar facility would provide cost-effective renewable energy consistent with TVA goals.

TVA must decide whether to execute the PPA with Selmer North I, LLC. If TVA does execute the PPA, SRC would construct and operate the solar facility. The potential effects of TVA's proposed action, including the effects of constructing and operating the solar facility, are described in an environmental assessment (EA) which is 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, TVA would not execute the PPA with Selmer North I, LLC and the solar facility would not be constructed and operated by SRC. TVA would rely on other sources of generation to meet its renewable energy goals.

Under the Proposed Action Alternative, TVA would execute the PPA and SRC would construct and operate the solar facility which would occupy approximately 99 acres of a 231-acre tract owned by SRC and located about 1 mile southeast of Selmer. The facility would utilize PV panels installed on single-axis tilt racks supported by metal posts driven into the ground. Buried electrical cables would connect the north-south oriented parallel rows of PV panels to direct current-to-alternating current power inverters and pad-mounted transformers. The transformers would be connected by buried cables to an on-site switch, metering, and pole-mounted riser. A 2.7-mile segment of an existing Pickwick Electric powerline would be rebuilt to connect the facility to Pickwick Electric's Forrest Hills Substation which is connected to the TVA transmission system. Due to the configuration of the substation, the 0.1-mile segment of the line adjoining the

substation would be underground. Most of the facility site would be graded to facilitate the installation and operation of the PV arrays. The facility would be enclosed by security fencing and revegetated as necessary with native grass.

TVA's preferred alternative is the Proposed Action Alternative. This alternative would fulfill the purpose and need for the action by providing TVA and its customers with additional renewable generating capacity with minor direct and indirect impacts.

### **Impacts Assessment**

The potential impacts of the proposed action are described in detail in the EA. Implementation of the proposed action would change the land use of the proposed solar facility site from agricultural to industrial. The project site is not subject to any zoning regulations and the proposed action would have little effect on the future land use of adjacent tracts. The project site is cropland and about two-thirds of it is classified as prime farmland. The impacts to prime farmland were evaluated in accordance with the Farmland Protection Policy Act and the impact rating score is below the threshold score indicating the potential for adverse impacts and the need for consideration of alternative sites. Given this rating score and because the site could be returned to agricultural use with little loss of productivity following removal of the solar facility, impacts to prime farmland would be insignificant.

Impacts to groundwater would be minimal. Undisturbed buffers would be maintained along streams crossing and adjacent to the solar facility site. No wetlands occur on the site and the proposed action is consistent with the requirements of Executive Order 11990 (Protection of Wetlands). SRC would implement best management practices described in a project-specific Stormwater Pollution Prevention Plan and impacts to surface water would be minor. A portion of the site is within the 100-year floodplain of Oxford Creek which adjoins the southern edge of the site. TVA has determined that there is no practicable alternative to siting a portion of the facility in the floodplain. All vulnerable electrical components located in the floodplain would be raised at least one foot above the 100-year floodplain elevation and the facility would not markedly alter drainage patterns. Based on these factors, impacts to floodplains would be insignificant and the proposed action would be consistent with the requirements of Executive Order 11988 (Floodplain Management).

The project site is annually harvested cropland, most recently cotton. The plant and animal communities present are low in diversity and common in the surrounding areas. While construction and operation of the solar facilities would displace some of the wildlife present, the impacts to vegetation and wildlife would be insignificant. The project site does not provide habitat for species listed under the Endangered Species Act and the U.S. Fish and Wildlife Service, in its comments on the draft of the EA, stated that it does not anticipate adverse impacts to federally listed endangered or threatened species. Suitable habitat for the Hatchie burrowing crayfish, state-listed as endangered, occurs on a portion of the project site. While facility construction activities could result in localized adverse impacts to this species, long-term effects on the species would be insignificant.

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 solar facility. TVA has determined that there would be no effects on historic properties and the Tennessee State Historic Preservation Office concurred with this determination.

Construction activities would result in minor and short-term impacts to air quality and transportation. Once operating, the solar facilities would have beneficial impacts to air quality

and greenhouse gas emissions as it would offset power that would otherwise be generated, at least in part, by fossil fuel combustion. One nearby residence could experience elevated noise levels from construction activities. Construction noise would be of short duration and restricted to normal weekday work hours. Consequently, anticipated noise levels would be insignificant. Visual impacts would result from the conversion of the project site from cropland to multiple parallel rows of solar panels. State Route 142 forms the northern border of the project site and the site slopes downhill towards the south. The rows of solar panels would be perpendicular to the highway and visible to motorists. Due to the low profile of the panels, the slope of the facility site, and the presence of another nearby solar farm that is partially visible from the highway, visual impacts would be insignificant.

The proposed action would result in beneficial socioeconomic impacts during construction due to the short-term increase in employment and purchase of materials, equipment, and services. The increase in the local property tax base resulting from the construction of the facility would result in a small, long-term beneficial effect. There would be no disproportionate adverse effects on minority or low-income populations.

### **Public and Intergovernmental Review**

A draft of the EA was issued for public and agency review and comment in July, 2016. TVA received comments on the draft EA from the U.S. Fish and Wildlife Service, Tennessee Department of Environment and Conservation, and nine individuals. One individual, an adjacent landowner, expressed concerns over the facility. SRC has met with this individual to address the concerns. None of the other comments opposed TVA's action. TVA has carefully reviewed the comments and addressed them in the final EA. TVA has consulted with the State Historic Preservation Office and federally recognized Native American tribes on the potential effects to historic properties.

### **Mitigation**

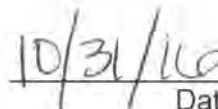
SRC would use routine best management practices such as dust suppression and erosion and sedimentation controls to minimize impacts to air and water resources. TVA has not identified the need for any non-routine mitigation measures to further reduce the anticipated impacts of the proposed action.

### **Conclusion and Findings**

Based upon the analyses documented in the EA, TVA concludes that its proposed action of executing the PPA with Selmer North I, LLC for the Selmer North I Solar Project and the subsequent construction and operation of the solar generating facility by SRC 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