

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

### **POWER PURCHASE AGREEMENT – SELMER NORTH II 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 II, LLC, an affiliate of Silicon Ranch Corporation (SRC), for electric power generated by the 10-megawatt (direct current) Selmer North II 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 II solar facility would provide cost-effective renewable energy consistent with TVA goals.

TVA must decide whether to execute the PPA with Selmer North II, 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 II, 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 73 acres of a 117-acre parcel located about 1.5 miles west 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 new 25-kilovolt (kV) power line, about 0.25 mile long, would run from the riser to an existing Pickwick Electric Cooperative powerline. The conductors on approximately 1.7 miles of the existing powerline would be replaced and fiber-optic communication lines would be installed. Much of the 73-acre

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 managed forest 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. Most of the project site is a managed pine plantation harvested and replanted to pine in 2007. A portion of the site was harvested between 2010 and 2012 and is currently a brushy field. Approximately 1.6 acres of the 73-acre facility site are classified as prime farmland. While the construction and operation of the solar facility would remove this area from potential agricultural production, there would be little long-term impact on the soil productivity and the impacts on prime farmland would not be significant given the small area affected.

Impacts to groundwater would be minimal. No streams occur on the 117-acre parcel and wetlands near the parcel boundary would be avoided during facility construction and operation. SRC would implement best management practices described in a project-specific Stormwater Pollution Prevention Plan and impacts to surface water would be minor. The project area is located outside the 100- and 500-year floodplains. The proposed action would be consistent with the requirements of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands).

The project site is mostly vegetated with young loblolly pine trees, shrubs, and grasses. 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 73-acre project site does not provide habitat for species listed under the Endangered Species Act and no adverse impacts to species listed by the state of Tennessee as endangered, threatened, or of conservation concern are anticipated. 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 species.

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. Overall visual impacts would be insignificant due to the presence of forest around much of the periphery of the site, the low profile of the proposed facility, and limited visibility from nearby residences and public roads.

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 May, 2016. TVA received comments on the draft EA from the U.S. Fish and Wildlife Service, Tennessee Department of Environment and Conservation, Southern Alliance for Clean Energy, and jointly the Southern Environmental Law Center and Tennessee Chapter of the Sierra Club. None of these 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 II, LLC for the Selmer North II 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.



August 11, 2016

---

Amy B. Henry, Manager  
NEPA Compliance  
Environmental Permitting and Compliance  
Tennessee Valley Authority

---

Date Signed