

FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

POWER PURCHASE AGREEMENTS – HOUSTON MISSISSIPPI SOLAR FARMS

The Tennessee Valley Authority (TVA) proposes to execute 20-year power purchase agreements (PPAs) through its Renewable Standard Offer (RSO) program with SR Houston, LLC for electric power generated by the Houston, MS 3.9-megawatt (MW) Solar Project and with Chickasaw Solar, LLC for the 1-MW Chickasaw County Solar Farm. The two proposed photovoltaic (PV) solar facilities are near the town of Houston in Chickasaw County, Mississippi. They would be connected to the TVA transmission network through an interconnection to an adjacent Natchez Trace Electric Power Association (NTEPA) 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 PPAs would help meet this need and the Houston and Chickasaw solar facilities would provide cost-effective renewable energy consistent with TVA goals.

TVA must decide whether to execute the PPAs with SR Houston and Chickasaw Solar, affiliates of Silicon Ranch Corporation (SRC). If TVA does execute the PPAs, SRC would construct and operate the solar facilities. The potential effects of TVA's proposed action, including the effects of constructing and operating the solar facilities, 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 PPAs with SR Houston and Chickasaw Solar and the two solar facilities 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 PPAs and SRC would construct and operate the two adjacent facilities which would occupy approximately 21 acres and be located about 2 miles north of Houston. The facilities would utilize PV panels installed on fixed-tilt racks supported by metal posts driven into the ground. Buried electrical cables would connect the rows of PV panels to direct current-to-alternating current power inverters and pad-mounted transformers. Short overhead power lines would connect the transformers to a nearby NTEPA power line. A small portion of the sites would be graded and a gravel access road would

be constructed for the Chickasaw facility. Both facilities would be enclosed by security fencing and revegetated as necessary with grass or other low growing plants.

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 facilities 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. About half of the site, currently used as pasture, is classified as prime farmland. While the construction and operation of the solar facility would remove the site, including about 11 acres of prime farmland from agricultural production, there would be little long-term impact on the soil productivity and the impacts on prime farmland would not be significant.

Impacts to groundwater would be minimal. A few streams and wetlands occur in the project area. The facilities have been designed to minimize impacts to these resources and the only direct impact would be from the construction of an access road across a narrow, linear herbaceous wetland. The associated wetland fill would require a Clean Water Act Section 404 Nationwide Permit and result in minimal adverse impacts to the wetland. SRC would implement best management practices during construction and operation of the solar facilities and impacts to water resources would be insignificant. The proposed action would be consistent with the requirements of Executive Order 11990 (Protection of Wetlands).

The Chickasaw facility and a portion of the Houston facility with a combined area of 5.9 acres would be located in the 100-year floodplain of Pettigrew Creek. TVA has determined that there is no practicable alternative to siting the facilities in the floodplain. The solar facilities would be designed so that all vulnerable components would be raised at least one foot above the 100-year floodplain and the results of an engineering/hydrology analysis showed there would be no change in area flooding. Impacts to floodplains and flooding would be insignificant and the proposed action would be consistent with the requirements of Executive Order 11988 (Floodplain Management).

The project site is mostly open fields with a few small patches of trees and used as horse pasture. 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 trees on the site have a low potential for providing summer roost habitat for the threatened northern long-eared bat which is unlikely to occur in the project area. Trees would be cleared between October 15 and April 1 to further reduce the potential for impacts to roosting bats and no impacts to federally or state-listed threatened or endangered species are anticipated.

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 facilities. TVA has determined that there would be no effects on historic properties and the Mississippi 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. A few nearby residents could experience elevated noise levels from construction activities. Construction noise would be of short duration, restricted to normal weekday work hours, and typically less than 65 A-weighted decibels at nearby houses. Consequently, anticipated noise levels would be insignificant. Overall visual impacts would be insignificant due to the low profile of the proposed facilities, their setback from nearby County Road 116, and partial tree screening.

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 facilities 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

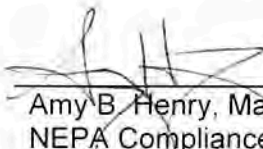
The proposed facilities were the subject of two public notices and public hearings by the Mississippi Public Service Commission and no comments opposing them were received during this review. In accordance with TVA implementing procedures for Executive Order 11988 – Floodplain Management, TVA issued the EA for a two-week public review and comment period in June 2016. No comments on floodplains were received. TVA did receive comments on other topics from the Southern Alliance for Clean Energy. These comments are addressed 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, erosion controls, and maintenance of buffers to minimize impacts to air and water resources. To avoid impacts to threatened bats, tree clearing would occur between October 15 and April 1. TVA has not identified the need for any other 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 PPAs with SR Houston, LLC for the Houston, MS 3.9-MW Solar Project and with Chickasaw Solar, LLC for the Chickasaw County Solar Farm and the subsequent construction and operation of the solar generating facilities 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