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FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY

ELORA SOLAR ENERGY CENTER
LINCOLN COUNTY, TENNESSEE

The Tennessee Valley Authority (TVA) has entered into a 20-year power purchase agreement (PPA) with Elora Solar LLC (Elora Solar), an affiliate of NextEra Energy Resources, LLC, to purchase the electric power generated by a proposed solar photovoltaic (PV) facility in Lincoln County, Tennessee. The proposed Elora Solar Energy Center would be constructed and operated by Elora Solar and would have alternating current (AC) generating capacity of up to 150 megawatts (MW). To interconnect to TVA's existing electrical grid, Elora Solar would build the new Elora Solar 161-kV transmission line (TL) that would connect the proposed on-site Elora Solar 161-kV Substation to TVA's proposed Mann Road 161-kV Switching Station at the northern extent of the new TL. TVA would connect the new Mann Road 161-kV Switching Station to TVA's existing Winchester-Fayetteville 161-kV TL and install fiber-optic overhead groundwire on this existing TL. Under the terms of the conditional PPA, TVA would purchase the electric output from the solar facility for an initial term of 20 years, subject to satisfactory completion of all applicable environmental reviews.

TVA produces or obtains electricity from a diverse portfolio of energy sources, including solar, hydroelectric, wind, biomass, fossil fuel, and nuclear. In 2015, TVA completed an Integrated Resource Plan (IRP) and associated Environmental Impact Statement (EIS). The 2015 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. Cost-effective renewable energy, including energy generated by solar PV, is one of the energy resources recommended in the IRP. Since 2015, TVA has undertaken several efforts to increase the amount of renewable energy in its generation portfolio. TVA's 2015 IRP reinforced the continued expansion of renewable energy generating capacity, including the addition of between 175 and 800 MW (AC) of solar capacity by 2023. In addition, in 2017, customer demand prompted TVA to release a Request for Proposal (RFP) for renewable energy resources. The PPAs that resulted from this RFP will help TVA meet immediate needs for additional renewable generating capacity in response to customer demands and fulfill the renewable energy goals established in the 2015 IRP. The Proposed Action would provide cost-effective renewable energy consistent with the IRP and TVA goals.

In June 2019, TVA released the final 2019 IRP and the associated EIS. These documents provide further direction on how TVA can best deliver clean, reliable and affordable energy in the Valley over the next 20 years, and the associated EIS looks at the natural, cultural and socioeconomic

impacts associated with the IRP. The 2019 IRP recommends a solar expansion between 1,500 and 8,000 MW of solar by 2028 and up to 14,000 MW by 2038.

The potential effects of the Proposed Action are described in an environmental assessment (EA) 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 purchase the power generated by the Project under the 20-year PPA with Elora Solar (i.e., TVA would not be involved with the Project), and Elora Solar would not construct or operate the Elora Solar Energy Center. Existing conditions (land use, natural resources, visual resources, physical resources, and socioeconomics) in the Project Area would remain unchanged. 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 energy and low greenhouse gas-emitting generation.

Under the Proposed Action Alternative, Elora Solar would construct and operate a 150-MW AC single-axis tracking PV solar power facility in Lincoln County, Tennessee. The solar facility would generate approximately 150-MW AC output for transmission to the electrical network. The energy generated by the Project would be sold to TVA in accordance with the terms of the PPA. The Project would occupy approximately 1,707 acres located north of the Elora community. The Project would connect to the TVA electrical network via approximately 4.4 miles of new 161-kV TL terminating at the proposed Mann Road 161-kV Switching Station. Under the Proposed Action, TVA would construct the new Mann Road 161-kV Switching Station northwest of the intersection of Shady Grover Cemetery Road and Shady Grover Road. The proposed Elora Solar 161-kV TL would connect the site to the new switching station. TVA would also install approximately 9.8 miles of fiber-optic overhead ground wire on the existing Winchester-Fayetteville TL, which would require replacement of some pole structures and improvements to existing pole access roads. TVA would install telecommunications connections at the Fayetteville, Winchester, and Elora Solar 161-kV substations.

Construction of the Project would require site preparation (surveying and staking, removal of tall vegetation/small trees, light grading/clearing, installation of security fencing around components in vicinity of one another and not separated by public roads, erosion prevention and sediment control best management practices [BMPs], preparation of construction laydown areas, and site access road construction) prior to solar array assembly and construction, which includes driving steel piles for the tracker support structures, installation of tracker structures and solar panels, construction of the Project substation and operations and maintenance building, and electrical connections and testing/verification. Construction would be sequenced to minimize the time that bare soil on the disturbed areas is exposed.

Construction activities would take approximately 14 months to complete using a crew that ranges from 150 to 250 workers. Work would generally occur seven days a week during daylight hours. Additional hours after dark could be necessary to make up schedule deficiencies or to complete critical construction activities. These activities would require installation and use of downward-facing, timer- and/or motion-activated lighting. Once construction is completed, the Project Site

would be revegetated with low-growing native and/or noninvasive grasses and herbaceous plants. The Project components would be enclosed together by chain-link security fencing. The areas within the security fencing would contain blocks of solar panels and inverters, associated equipment, and infrastructure including a new Project substation, access roads, and electrical cabling.

Once the facilities are completed, there would be minimal human activity during operation. Moving parts of the solar facility would be restricted to the east-to-west facing tracking motion of the solar modules. Otherwise, the PV modules would collect solar energy and transmit it to the TVA power grid. Maintenance activities would include fence repair, vegetation control, and periodic array inspection, repairs, and maintenance performed by up to four full-time, on-site staff. Water service, sewer service, and permanent, downward-facing, timer- and/or motion-activated lighting are anticipated as on-site needs during operations.

The TVA-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 direct and indirect environmental impacts due to the implementation of BMPs and minimization and mitigation efforts. The Project would also result in some beneficial effects. Implementation of the Project would help TVA meet renewable energy goals and future 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 1,521 acres (89 percent) of the 1,707-acre Project Site would be cleared and/or graded for the solar facility. These changes would cause minor adverse impacts to geology and soils due to slight, localized increases in erosion and sedimentation. Construction activities would cause short-term impacts to air quality, utilities, and visual resources and temporary increases in noise and traffic. Impacts to air quality are anticipated due to short-term, minor increases in vehicle emissions and fugitive dust suspension. Heightened noise during construction would primarily result from pile driving activities during daylight hours for an approximate six-month period. There may be brief local utility outages as the solar facility is brought on-line. With the implementation of federal and state requirements and BMPs, impacts to waste management and public and occupational health and safety during the life of the Project would be minor to negligible.

Due to the implementation of BMPs, no significant impacts to groundwater and floodplains are expected. Steps taken in designing the site layout have avoided impacts to wetlands to the extent practicable and minimized adverse impacts to floodplains and their natural and beneficial values. Therefore, the Proposed Action would be consistent with the requirements of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands). Complete avoidance of surface water was not feasible, and the construction and operation of the Project would permanently affect two perennial streams (40 linear feet; 0.004 acre), one ephemeral stream (20 linear feet; 0.002 acre), and approximately three wet weather conveyances (WWCs) for road crossing improvements. The Project would additionally affect seven ephemeral streams (0.03 acre), 10 wetlands (0.16 acre), and approximately 49 WWCs due to the placement of solar panels and/or pole structures. These impacts would be subject to the conditions of the United States

Army Corps of Engineers Section 404 and the Tennessee Department of Environment and Conservation Aquatic Resource Alteration permits described in the EA.

Some long-term habitat loss would occur due to the clearing of approximately 97 acres of currently forested land on the Project Site and conversion to native grasses and/or other noninvasive vegetation. These changes would result in effects to common wildlife. Potentially suitable summer roosting habitat for the northern long-eared bat would be removed for the construction of the proposed solar facility and electrical interconnection. TVA determined that the Proposed Action may affect but is not likely to adversely affect the northern long-eared bat and the Indiana bat. Consultation under Section 7 of the Endangered Species Act was performed with the United States Fish and Wildlife Service on November 19, 2019. Concurrence was received on November 26, 2019, on the condition that suitable habitat removal must occur between October 15 and March 31. The Project is not likely to adversely affect other federally or state-listed species or migratory bird species of concern.

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 (THC) and interested federally recognized Indian tribes regarding this agency determination. On December 9, 2019, THC concurred that the Project as currently proposed would not adversely affect any historic properties. The Jena Band of Choctaw Indians responded and had no objections to the Project.

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. Operations would result in positive, long-term impacts to economics, employment, and population in Lincoln County and the local region as a result of permanent job creation and increase in the local tax base. While low-income populations are prominent in the vicinity of the solar facility, the Project impacts, as described in the subject EA, would primarily occur during the 20-month construction period and would be minor, and off-site adverse impacts would be negligible. As such, no disproportionately high or adverse direct or indirect impacts on low-income populations or other environmental justice populations due to human health or environmental effects are expected to result from the Proposed Action. In addition, the Project would have minor beneficial impacts to employment and income levels in the local region that could provide additional opportunities to nearby environmental justice populations.

The completed solar facility would change land use of the approximate 1,707-acre facility site from agricultural and undeveloped, forested to solar. The Project Site is currently zoned A1, Agriculture-Forestry-Rural Residential District, which includes alternative renewable energy uses as permitted uses. The change from agricultural and undeveloped, forested land uses to solar land use would result in conversion of approximately 972 acres with soils designated as prime farmland by NRCS for the life of the Project. However, with decommissioning of the Project, removal of Project components, and site reclamation, the Project Site could return to agricultural uses. Visual impacts during operation of the solar facility would be minor to moderate in the immediate vicinity but minimal on a larger scale, due to variation of the visual attributes of the

vicinity. Noise impacts would be minor during construction, particular during the 6-month period when pile driving would occur, but negligible during operations due to the distance of noise receptors from the Project inverters. Minor impacts to air quality would occur during construction, primarily as a result of an increase in vehicular emissions in the vicinity. Offsetting beneficial effects to greenhouse gas emissions would occur during operations, as the nearly emissions-free power generated by the solar facility would help offset power that would otherwise be generated by the combustion of fossil fuels.

Public and Intergovernmental Review

In June 2019, Elora Solar announced the proposed Elora Solar Energy Center at a community meeting in Lincoln County. The shared details included the Project acreage, the Project's electrical output, an overview of tasks necessary to implement the Project, and the potential economic benefits of the Project to the local community.

On November 25, 2019, TVA issued the draft subject EA for public review and comment. TVA announced the review period via a media advisory, a notice in *Elk Valley Times*, and outreach to key stakeholders, government agencies, elected officials, and interested federally recognized Indian tribes. TVA 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 two comments were received from the general public, neither of which warranted changes in the Final EA.

Mitigation

To address adverse impacts associated with the Proposed Action, Elora Solar and TVA would implement minimization and mitigation measures in relation to potentially affected resources, including such measures required by permits, as described in detail in the EA. To minimize adverse impacts on natural and beneficial floodplain values, construction and maintenance activities would occur during dry periods as much as possible; the TL rights-of-way would be revegetated where natural vegetation is removed; BMPs would be implemented during construction, as described in more detail below; construction would adhere to the TVA subclass review criteria for TL location in floodplains; and construction and access road improvements would be conducted such that upstream flood elevations would not increase by more than one foot. To reduce noise impacts, construction would primarily occur during daylight hours. Elora Solar would implement a variety of plans and programs to minimize risks to public and occupational health and safety and to ensure proper handling of any chemicals or hazardous materials stored and utilized on site. Elora Solar would comply with the terms of the site-specific Storm Water Pollution Prevention Plan coordinated with the Tennessee Department of Environment and Conservation and implement other routine BMPs, such as non-mechanical tree removal within surface water buffers, placement of silt fence and sediment traps along buffer edges, and proper vehicle maintenance to reduce the potential for adverse impacts to groundwater. Silt fencing would also be installed around areas cleared of vegetation, and efforts would be made to balance soil cut-and-fill quantities to help alleviate the transportation of soils and sediments off-site during construction. If substantial traffic congestion occurs during construction, Elora Solar would minimize these effects by implementing staggered work shifts during daylight hours.

Tree removal and demolition of one abandoned residential building for the Project would occur between October 15 and March 31 to minimize impacts to federally listed bat species. Tree clearing following this schedule would also minimize impacts to nesting birds by occurring outside of nesting season. Impacts to birds would further be minimized by implementing Avian Power Line Interaction Committee guidelines in finalizing the design of the Elora Solar TL. Following grading, the Project Site would be revegetated with native and/or noninvasive vegetation to reintroduce wildlife habitat, limit the spread of invasive species, and further support on-site soils. In right-of-way areas, only USEPA-approved herbicides would be used, where needed, and these would be applied in a manner that minimizes aquatic impacts. Downward facing and timer- and/or motion-activated lighting would be installed to limit attracting wildlife, and Project personnel would be instructed on wildlife resource protection measures to further minimize impacts to biological resources. To minimize long-term Project effects to land use and visual resources, anti-reflective photovoltaic panels would be installed.

Conclusions and Findings

Based upon the analyses documented in the EA, TVA concludes that the Proposed Action Alternative of construction and operation of the solar generating facility and TVA's purchase of the electric output pursuant to the PPA with Elora Solar 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