

RECLAMATION

Managing Water in the West

Draft FINDING OF NO SIGNIFICANT IMPACT

San Luis Solar Project

FONSI-14-059



U.S. Department of the Interior
Bureau of Reclamation

December 2015

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

BUREAU OF RECLAMATION
South-Central California Area Office, Fresno, California

FONSI-14-059

San Luis Solar Project

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act of 1969, as amended, the South-Central California Area Office of the Bureau of Reclamation (Reclamation), has determined that issuing San Luis Renewables and/or their Assignee(s) (Applicant) a 30-year Land Use Authorization to access, install, operate, maintain, and remove a 26-megawatt (MW) alternating current (AC) solar photovoltaic (PV) energy generating project known as the San Luis Solar Project (Project) on its Federal lands is not a major federal action that will significantly affect the quality of the human environment and an environmental impact statement is not required. This Finding of No Significant Impact (FONSI) is supported by Reclamation's Environmental Assessment (EA) Number EA-14-059, *San Luis Solar Project*, and is hereby incorporated by reference.

Background

In October 2009, Governor Arnold Schwarzenegger and Secretary of the Interior Ken Salazar signed an agreement to begin the development of renewable energy on Federal lands in California. The initiative directed Interior and State of California agencies to identify areas suitable for renewable energy development, identify renewable energy zones based on development potential, and prioritize application processing for solar development in renewable energy zones.

The Secretary of the Interior's Secretary's Order 3285A1, amended February 22, 2010, established a policy encouraging the production, development, and delivery of renewable energy as one of Interior's highest priorities. In furtherance of this policy, agencies and bureaus within Interior work collaboratively with each other and with other Federal agencies, departments, tribes, states, local communities, and private landowners to encourage the timely and responsible development of renewable energy and associated transmission while protecting and enhancing the nation's water, wildlife, cultural, and other natural resources. Reclamation has made the bringing online of non-hydro renewable energy sources one of its top five priorities.

Reclamation owns most land surrounding San Luis Reservoir and O'Neill Forebay, including the lands on which the Project is proposed. The following agencies are involved in operating and managing these lands: California State Parks (State Parks) (recreation management), California Department of Water Resources (reservoir and water distribution operations), and California Department of Fish and Wildlife (San Luis and O'Neill Forebay Wildlife Areas and Upper and Lower Cottonwood Wildlife Areas). The San Luis and Delta-Mendota Water Authority has rights to use portions of Sites 2 and 3 within the San Luis Reservoir State Recreation Area (SRA) for operations and maintenance. In addition, the California Department of Forestry and Fire Protection (Cal Fire) has a fire station on Reclamation lands to the south of State Route (SR) 152, along Gonzaga Road.

Proposed Action

Reclamation proposes to issue to the Applicant a 30-year Land Use Authorization to access, install, operate, maintain and remove a 26 MW AC solar PV energy generating project in and adjacent to the SRA. The Project would consist of the three separate solar PV systems (Sites 1, 2, and 3), which would consist of solar PV panels, racks to hold the panels, and electrical infrastructure. Installation, operation, maintenance, and eventual removal of the Project would be done as described in Section 2.2 of EA-14-059.

Environmental Commitments

The Applicant shall implement the environmental protection measures listed in Table 6 of EA-14-059 to reduce environmental consequences associated with the Proposed Action. Environmental consequences for resource areas assume the measures specified would be fully implemented.

Findings

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the quality of the human environment is supported by the following findings:

Resources Eliminated from Detailed Analysis

As described in Table 7 of EA-14-059, Reclamation analyzed the affected environment and determined that the Proposed Action does not have the potential to cause direct, indirect, or cumulative adverse effects to the following resources: agricultural and forest resources, global climate change, socioeconomics, environmental justice, Indian Trust Asses, and Indian Sacred Sites.

Water Resources

Construction, trenching, grading, and stockpiling activities would, if not properly addressed, temporarily result in bare soil that could enter O'Neill Forebay and the Delta-Mendota Canal. In order to address this potential effect, the Applicant would prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) before any soil disturbance begins, as part of obtaining coverage under the Statewide National Pollutant Discharge Elimination System Construction General Permit Order (2009-0009-DWQ). The SWPPP will include construction best management practices (BMPs) to minimize downstream erosion and sedimentation.

The preparation and implementation of an approved SWPPP and implementation of Project design measures and BMPs would avoid and/or minimize major adverse surface water quality effects to O'Neill Forebay and the Delta-Mendota Canal as well as groundwater effects during Project construction (see Section 3.2.2.2 of EA-14-059 for a detailed analysis).

Chemicals used during Project operation would be minimized through development and implementation of the Project's Hazardous Materials Management Plan, which includes a spill prevention and response plan. In addition, the Project includes detention basins that would allow for storm water infiltration and percolation. Potential adverse effects to water quality from

Project operation would be minor and would be avoided and/or reduced by implementation of the Hazardous Materials Management Plan.

Battery leaks or a battery fire at the Project's battery energy storage system (BESS) could theoretically result in the release of flammable electrolytes, coolant, or refrigerant, which could affect surface water and/or groundwater quality. The Project's Emergency Action Plan and Fire Prevention and Protection Plan would provide for emergency training and response of Project personnel in the event of a release.

Land Use

The Project would be constructed and operated on Reclamation land and would not change from existing land uses designated in the San Luis Reservoir SRA Resource Management Plan/General Plan (RMP/GP). The RMP/GP allows for "consideration and development of renewable energy projects within the Plan Area." No adverse land use effects would occur.

Biological Resources

The three solar PV system sites would be located in disturbed areas that were previously cleared of vegetation and leveled for the development of San Luis Reservoir, O'Neill Forebay, and ancillary support, access, and conveyance structures. The gen-tie alignment and staging areas have also been previously cleared of vegetation during the construction of the existing electric transmission towers/lines, the development of SR 152 and SR 33, or the construction of the water conveyance system. As a result, there is a low potential for special-status wildlife species to use the marginal habitat in the Project area.

Construction activities would temporarily disturb the marginal habitat, which may affect federally listed blunt-nosed leopard lizard and San Joaquin kit fox. Also, special-status bird species have potential to forage and or nest in the Project area. Construction-related effects to special-status wildlife and bird species would be avoided and or minimized through the incorporation of environmental protective measures (see Table 6 in EA-14-059).

For security purposes, fences would be installed around the perimeter of each site during Project operation. All fencing will leave an opening between the fence mesh and the ground to allow San Joaquin kit fox, their prey, and other wildlife to move in and out of the facility.

To reduce the potential for birds to collide with the panels due to the "lake effect," in which birds can mistake a reflective solar facility for a water body, the Project design includes the use of anti-reflective glass. In addition, the presence of San Luis Reservoir, O'Neill Forebay, canals, ditches, and other water conveyance systems in the Project vicinity are also expected to reduce the potential for bird strikes.

Federally Listed Species Determination

Although the Project may affect blunt-nosed leopard lizard and San Joaquin kit fox, environmental commitments have been incorporated into the Proposed Action to avoid and or minimize potential impacts to these federally listed species and their habitat. As a result, Reclamation is consulting with the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act.

Cultural Resources

The only direct effect from the Project would be to the O'Neill Substation where a switch connecting the gen-tie line would be added. The new connection would be such a small intrusion on the property that it would have no consequence to the substation's overall structural and design integrity. The visual effect on the property as a whole would be temporary and reversible. Therefore, the Project would have no adverse effect on this historic property.

The construction of the solar PV systems and the gen-tie line that would cross over the San Luis Canal and the O'Neill Pumping-Generating Plant intake canal would have minor, temporary, and reversible indirect effects to the visual setting. No Native American sites within 0.5 mile of the Project's Area of Potential Effects have clear, unobstructed views of the Project area; therefore, no indirect effects would occur. Pursuant to 36 Code of Federal Regulations (CFR) 800.5(b), no historic properties would be adversely affected, directly or indirectly, by any of the Project-related activities. Reclamation is consulting with the State Historic Preservation Officer on a Section 106 finding of No Adverse Effect for the Project, pursuant to 36 CFR 800.5(b). The EA will not be finalized until consultation is completed.

Although the entire Project area has been affected by almost 50 years of intensive dam-related development and recreational use, there remains a small potential for buried archaeological deposits to exist within the Project's Area of Potential Effects. Construction-related effects to Cultural Resources would be minimized through the incorporation of environmental protective measures (see Table 6 in EA-14-059).

Topography, Geology, and Soils

Project construction has the potential to cause short-term minor adverse effects from earthmoving and vegetation removal. The construction contractor would implement a SWPPP, which would minimize any potential soil erosion during construction. The Project includes design features and BMPs to reduce soil erosion, such as wetting of disturbed soils to prevent dust and use of silt fencing, dust control, and hydroseeding or other reseeded.

Project operation would not affect topography, geology, or soils. Project operations would not involve excavation or grading, and ongoing maintenance would be addressed by the SWPPP.

Air Quality

Temporary and minor increases in air pollutant and greenhouse gas (GHG) emissions would occur from the use of construction equipment and vehicles and the disturbance of soils during site grading and installation of solar PV panels, fencing, conduits, gen-ties, and other Project components. As shown in Table 8 and Table 9 of EA-14-059, estimated construction and operational emissions would not exceed the *de minimis* thresholds of the San Joaquin Valley Air Pollution Control District. As such, a conformity determination pursuant to the Clean Air Act is not required and air quality impacts would be insignificant.

In addition, the Project would also provide long-term operational benefits to local air quality and GHG emissions as the use of solar PV panels for electricity generation would displace the amount of electricity that may otherwise be generated by fossil fuel combustion.

Visual and Aesthetics

Construction of the solar PV system sites and temporary construction use of access roads and staging areas would take place immediately adjacent to O'Neill Forebay, SR 152, and SR 33, and the Delta-Mendota Canal. Large construction equipment, staging areas, and increased activity and movement in and around the sites, gen-tie alignment, and construction access roads could all temporarily reduce the quality of the visual setting and experience for viewers recreating, traveling, and residing near the Project area.

Operation of the proposed Project would affect visual resources and result in changes to the landscape character in the Project vicinity. Generally, the gen-tie poles and lines would be more visible than the solar PV systems with the exception of the western portion of the Medeiros Use Area where the solar PV system and fence would dominate the landscape due to immediate proximity.

Visual simulations in Section 3.8 of EA-14-059 demonstrate that the proposed gen-tie is difficult to discern from other surrounding similar objects at approximately 2 miles. Since visibility can vary based on environmental and atmospheric conditions, it is assumed that the proposed 70 kilovolt (kV) gen-tie poles would be visible to casual viewers at distances no greater than 3.5 miles. Due to the existing number of transmission structures within the Project vicinity, the new gen-tie alignment would not result in a substantial change to the landscape. The most noticeable change to the landscape would be the increased density of overhead utilities and their overall presence in the landscape.

In general, Project effects to visual resources would be minor to moderate, with the exception of the western portion of the Medeiros Use Area, where effects to visual resources would be major. To reduce this impact, the Site 1 fence along O'Neill Forebay would be equipped with privacy slats in a color that matches or complements the surrounding environment, and native shade trees would be planted to screen views of Site 1 and the fence from the adjacent campsites. These Project components would help to enhance the visual setting and partially offset the visual resource impact at the western portion of the Medeiros Use Area.

Recreation

Construction of Site 1 would have temporary impacts to visitors in the Medeiros Use Area. Campers and day-use visitors would be exposed to the sights and sounds of construction-related traffic, personnel, and activities. Although construction impacts would be temporary, some visitors may experience a reduced quality of their recreational experience during hours when construction activities are taking place. Visitors on the water in O'Neill Forebay could also be exposed to construction disturbance.

The proposed gen-tie route that would connect Site 1 with the O'Neill Substation would parallel SR 152 and SR 33. Construction of the gen-tie route has the potential to result in minor, short-term delays or limits to access into Medeiros and the O'Neill Forebay Wildlife Area from SR 33 while 70 kV lines are strung between poles.

Construction and operation of the Project at Sites 2 and 3 would not affect recreation in the SRA because no recreational facilities are near the sites. Visitors to the Forebay Golf Course could

have short-term exposure to the sights and sounds of construction-related traffic, personnel, and activities, depending on their proximity to the Project but operation of the Project would not affect recreation at the Golf Course.

The proximity of Site 1 to recreational campsites at the Medeiros Use Area could adversely affect visitors' perceived recreational value of the campsites and day use opportunities in that area during operation of the Project. However, Site 1 would have perimeter fencing equipped with privacy slats in a color that matches or complements the surrounding environment, and planted native shade trees along the fence in locations needed to screen views from the adjacent campsites.

The presence of Site 1 and its perimeter fence would limit the space available to accommodate more than a small number of additional designated campsites and/or RV sites along the western side of Medeiros. Although the Project would limit the addition of campsites along the western side of Medeiros, it would not preclude the addition of tent/RV sites and primitive campsites elsewhere in Medeiros, if warranted in the future.

Traffic and Circulation

Most construction equipment and vehicles would be brought to the solar PV system sites at the beginning of the construction process, and would remain on-site throughout the duration of the construction activities for which they are needed. Project construction traffic would involve construction worker commute vehicles, plus periodic truck deliveries of materials and supplies, trash removal, other off-site truck shipments, and miscellaneous trips by Project staff. Peak traffic volumes would coincide with the peak of construction employment, which is estimated to be approximately 150 workers. The construction impact would be temporary, and limited to the period of peak construction. Construction of the proposed Project would not result in an unacceptable traffic delay associated with additional traffic.

Once constructed, the proposed Project would require about three to five part-time workers for maintenance and operations. This might involve equipment maintenance and periodic replacement or repair work. Occasional cleaning of the solar equipment will involve use of a water truck. Operations would therefore require only periodic trips, and would not measurably contribute to existing or future traffic conditions or impacts.

Utilities and Emergency Services

Limiting access to the solar PV system sites will be necessary both to ensure the safety of the public and to protect the equipment from potential theft and vandalism. Sites 1, 2, and 3 would be fenced to facilitate Project and equipment security and surveillance. However, the Project will follow Reclamation Health and Safety Standards and all Occupational Safety and Health Administration and California Occupational Safety and Health Administration requirements in construction and operation. Also, an Emergency Action Plan, Hazardous Materials Management Plan, Fire Prevention Plan, and Health and Safety Plan would be implemented.

Emergency vehicle access to and through Project work areas would be maintained throughout construction, and emergency vehicles would be given access priority. There would be no impacts to utilities or emergency services.

Hazardous Waste and Materials

Project operation will require the generation, transmission, and storage of electricity that involves equipment and limited materials that can be hazardous if released. The Project's BESS would have primary and secondary containment. The Project's Emergency Action Plan will be implemented and updated during Project construction and operations, and personnel will be trained in response to battery storage failures. Appropriate spill containment and clean-up kits would be kept on site during construction and maintained during Project operation. With implementation of these plans and associated BMPs, impacts would be insignificant.

Noise

Construction of Site 1 would result in temporary noise impacts to visitors at the Medeiros Use Area. Most construction would take place during daytime hours, Monday through Friday. During construction at Site 1, some visitors may experience disruption that could reduce the quality of their recreational experience. Visitors on the water of O'Neill Forebay could also be exposed to temporary construction noise, although noise would decrease with distance from the activity. Nighttime construction work is not planned; however, some weekend work may be necessary. Noise levels during construction would exceed the Merced County General Plan noise standards, however they allow for temporarily elevated noise levels during construction. To minimize effects to visitors from temporary noise impacts, environmental protective measures have been incorporated into the Project (see Table 6 in EA-14-059).

Construction noise at Sites 2 and 3 is not expected to affect the residential area that is approximately 0.8 mile (4,200 feet) to the east of Site 2. At that distance, temporary construction noise would not exceed the Merced County General Plan.

The northern half of the Forebay Golf Course is approximately 450 feet east of Site 3 and approximately 0.3 mile (1,400 feet) east of Site 2. Golf course visitors could experience construction noise. However, this range would be within the Merced County General Plan.

The northern end of the O'Neill Forebay Wildlife Area is approximately 0.2 mile (1,000 feet) to the south of Site 2. Temporary noise from construction of Site 2 can reasonably be assumed to be lower than Merced County General Plan.

Part of the gen-tie route follows the east and north sides of the O'Neill Forebay Wildlife Area. Short-term construction noise could affect visitors, as they would exceed noise standards in the Merced County General Plan, depending on their location in the 700-acre area. The maximum noise levels would not exceed the noise levels from visitors hunting in the area.

Project operation will typically not involve equipment that generates noise. Maintenance or service vehicles driving to and from the solar PV systems and potential repairs or replacement of equipment would occasionally result in short-term noise increases, but not at a level that would affect the ambient noise environment.

Irreversible and Irretrievable Commitment of Resources

The Land Use Authorization that Reclamation proposes to issue to the Applicant for the Project would result in a long-term commitment of resources, primarily at the three solar PV system

sites, for approximately 30 years. However, the Land Use Authorization would not constitute an irretrievable commitment of resources because the Applicant would decommission and completely remove the solar PV systems and supporting electrical and facility systems at the end of the Project's useful life. Following facility decommissioning and removal, the area would be reclaimed according to applicable regulations at the time of decommissioning.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. The incremental effect of the Proposed Action was examined with impacts from past, present, and reasonably foreseeable future actions in the same geographic area in order to determine whether cumulatively significant impacts could occur.

Water Resources

Effects to water resources from Project construction and operation would be minor. Other past, present, and reasonably foreseeable future agricultural, development, infrastructure, and energy development projects may result in similar effects to water resources. The proposed San Luis Solar Project includes design measures and avoidance/minimization measures that would reduce potential effects to water resources to minor levels. The Project would not result in cumulative significant effects to water resources.

Land Use

As the Project would not conflict with existing management zone designations from the RMP/GP or land use designations outside of Federal lands, it would not contribute to cumulative impacts to land use.

Biological Resources

Effects to special-status wildlife species from Project construction and operation would be minor. Other nearby projects in the same geographical area also have, or had, the potential to affect special-status wildlife species, such as the Villages of Laguna San Luis Community Plan, Santa Nella Community Specific Plan, Quinto Solar PV Project (to be completed in 2015), Wright Solar Park (construction estimated for 2015 to 2016), and San Luis Transmission Project (construction estimated for 2018 to 2021). As part of the biological permitting processes for those projects, the sponsor agencies must demonstrate, through mitigation and other measures, that the projects would not have major adverse impacts on special-status species. Combined, the projects would not result in cumulatively significant effects to San Joaquin kit fox or other special-status species.

Cultural Resources

The Project would involve excavation and could affect undiscovered cultural resources. Any unanticipated discoveries during construction or operation would be addressed through applicable Federal processes (e.g., 36 CFR Part 800, 43 CFR Part 10). As the Project would not adversely affect archaeological or built-environment resources, it would not contribute to cumulative impacts on those resources.

Topography, Geology, and Soils

As the Project would not affect topography, geology, or soils, it would not contribute to cumulative impacts to those resources.

Air Quality

The Project would temporarily contribute to cumulative air quality emissions in San Joaquin Valley Air Pollution Control District; however, the Project would provide long-term operational benefits to local air quality and GHG emissions. The Proposed Action's contribution to this cumulative impact is therefore considered beneficial.

Visual and Aesthetics

Past, present, and future projects that have the potential to contribute to cumulative effects to visual resources include residential development, solar energy projects, and expansion of commercial developments. These projects, including the proposed Project, would all generally contribute to the visual interruption of open space in the Project vicinity. Yet, design measures and avoidance/minimization measures have been incorporated into these projects to reduce potential effects to visual and aesthetics to minor levels. Combined, the projects would not cumulatively result in significant effects.

Recreation

There are past, present, and future projects that have the potential to contribute to cumulative effects to recreation, and they include residential development, solar energy projects, and expansion of commercial developments. Combined, these projects, could all generally impact recreation. Yet, design measures and avoidance/minimization measures have been incorporated into these projects to reduce potential effects to minor levels, and would not cumulatively result in significant effects.

Traffic and Circulation

As the Project would not measurably impact traffic and circulation either during construction or operation, it would not contribute to cumulative impacts to those resources.

Utilities and Emergency Services

The Project would not adversely affect utilities or contribute to cumulative effects on utilities. Project construction and operation could result in minor effects from increased demands on emergency services, however, when combined with other projects within the area, they would not be cumulatively significant.

Hazardous Waste and Materials

The use of hazardous materials is site specific, and not expected to contribute to any cumulative impacts associated with other projects.

Noise

Although construction noise from the Project could affect Medeiros Use Area, the overall effect of potential disturbance to SRA visitors would not cumulatively add to the recent noise impacts from other projects in the area.