Finding of No Significant Impact

Mana Solar Project
American Samoa

U.S. Department of Agriculture
Rural Utilities Service (RUS)

Mana Solar, LLC

Prepared by:
Environmental and Historic Preservation Division

Rural Utilities Service

August 2024

A. INTRODUCTION

Mana Solar, LLC plans to submit a financing request to the U.S. Department of Agriculture (USDA), Rural Utilities Service (RUS) to construct and operate the proposed Mana Solar Project (Project) in the village of Pava'ia'i, County of Tualauta, island of Tutuila, Territory of American Samoa. RUS is considering this financing request. Prior to taking a federal action (i.e., providing this financing assistance), RUS is required to complete an environmental impact analysis in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. §§ 4231–4347), the Council on Environmental Quality's (CEQ) regulations for implementing NEPA (40 CFR Parts 1500-1508), and Rural Development's (RD's) NEPA implementing regulations, Environmental Policies and Procedures (7 CFR Part 1970).

After completing an independent analysis of an environmental assessment (EA) prepared by Mana Solar, LLC and its consultant, RUS concurred with its scope and content. In accordance with 7 CFR § 1970.102, RUS finds that the EA is consistent with federal regulations and meets the standards for an adequate assessment. In accordance with 7 CFR §1970.102, Mana Solar, LLC published a newspaper notice announcing the availability of the EA for public review. In accordance with Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; and USDA Departmental Regulation 9500-3, Land Use Policy, a second newspaper notice also informed the public of the proposed conversion of wetlands and effects to floodplains and requested comments concerning the proposal, alternative sites or actions that would avoid these impacts, and methods that could be used to minimize these impacts. In addition, RUS considers the Project an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 USC 470(f), and its implementing regulation, "Protection of Historic Properties" (36 CFR Part 800).

B. PROJECT DESCRIPTION AND PURPOSE AND NEED

Mana Solar, LLC is proposing construction of the Project, a 13.37-megawatt (MW) direct current (DC)/10.2-MW alternating current (AC) solar generation facility in the Western District of American Samoa. The Proposed Action would occur within three parcels totaling approximately 30 acres of land (Project Area) in the village of Pava'ia'i, County of Tualauta, island of Tutuila, Territory of American Samoa.

The USDA's purpose and need is to either approve or deny Mana Solar's application for financing. The USDA's RUS administers programs that provide infrastructure improvements to rural communities. Specifically, the RUS Electric Program provides loans and loan guarantees to finance the construction or improvement of electric distribution, transmission, and generation facilities in rural areas (USDA 2018b). Financial assistance can include direct loans, guaranteed loans, and grants in order to accomplish program objectives. The Project and borrower meet the eligibility requirements to receive the loan through RUS, as established by the Rural Electrification Act of 1936 and pursuant to 7 CFR Chapter XVIII.

Mana Solar, LLC's purpose and need for this Project is to aid in the American Samoa Renewable Energy Committee's goal of 50% renewable power by 2025 and 100% renewable power by 2040 (U.S. Energy Information Administration 2023). The construction of a commercial solar facility to generate and distribute clean, renewable photovoltaic solar energy to the existing electrical grid for the County of Tualauta per the existing purchase power agreement (PPA) with American Samoa Power Authority (ASPA) would help in attaining the renewable power goals identified above.

C. ALTERNATIVES EVALUATED

C.1 No Action Alternative

Under the "No Action" alternative, RUS would not provide funding for the Project, and the site would not be developed with a solar facility. Potential impacts associated with Project activities (i.e., construction, operation and maintenance, and decommissioning) would not occur, and the island would not receive the distributed power in accordance with the PPA with ASPA. The anticipated generation from this potential alternative energy/solar source would not be available, and ASPA would then have to seek alternative electric generation sources to meet anticipated needs. The Project site would continue as previously disturbed agricultural land. The no-action alternative does not meet the purpose and need of the Project as it would not result in the generation and distribution of a clean source of renewable energy; however, the no-action alternative is presented as a point of comparison to the Project.

C.2 Proposed Action

The Proposed Action would include the installation of approximately 23,000 commercially available polycrystalline modules to convert sunlight to direct current (DC) power. Modules would be grouped into solar arrays totaling 16.1 acres that would be oriented east to west and installed in in a saw-toothed manner, as allowed by on-site topography. DC power generated by the Mana Solar arrays would be routed via underground cables to a fenced control area on an adjacent solar farm, which would contain a control room, one transformer, PCP (primary control provision), EMS (energy management system), and a lithium-ion battery energy storage system with a storage capacity of up to 4 MW/hour. From the control area, power would be "stepped-up" to a higher voltage for transmission to the local distribution grid via a 34.5-kilovolt transmission line owned and managed by the ASPA. The control area and transmission line are not included as part of Mana Solar, LLC's application for financial assistance.

The Project would be situated on private land that has been leased under agreement with ASPA. Project power would be supplied to the local distribution grid, based on the executed PPA with ASPA. The term of the PPA is 30 years, plus two five-year options. Project operations are anticipated to start in 2024 once all approvals and construction are complete. Production for the Project is estimated at 20,187,000 kWh in Year 1, with a 0.5% annual degradation for all subsequent years. At the end of the Project's lifecycle, the Project would be decommissioned. All aboveground Project components would be removed from the site for disposal or recycling.

C.3 Alternatives Eliminated from Further Consideration

In addition to the No Action Alternative and Action Alternative, Mana Solar, LLC considered other project location or energy source alternatives which are documented in the Alternatives section of the EA.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

In accordance with the requirements of § 1970.104(b), a summary of anticipated impacts on the human environment is provided below, including any mitigation measures deemed necessary to avoid, minimize, or mitigate impacts. Mana Solar, LLC. is responsible for implementing these measures.

D.1 Air Quality

The primary Project impact to air quality and climate would occur from traffic and dust-based emissions (criteria air pollutants and greenhouse gases [GHGs]) generated by construction activities. However, these impacts would be 1) limited in scale based on the small, localized area where construction would occur and a limited number of vehicles and equipment needed, and 2) temporary in duration. Mana Solar, LLC's implementation of their erosion control plan would be employed to further reduce particulate matter emissions, as practicable. Operational activities are anticipated to generate negligible, long-term criteria air pollutant and GHG emissions associated with intermittent and short-duration vehicle or equipment operation. Additionally, long-term, the Project could also help reduce criteria air pollutant and GHG emissions by providing a local source of renewable energy to the grid.

D.2 Geology and Soils

During Project construction, grading and ground-disturbing activities on up to 30 acres of land would be required. Project actions could result in compaction or affect soil productivity due to loss or mixing of organic matter during site preparation. However, these impacts would be minimized through the implementation of erosion controls such as turf blankets, mats, silt fencing, geo-textiles, fiber rolls, and other tools to restrict soil movement. Excavation depths would be shallow (up to 3 feet) and would alter less than 1 acre of geologic features due to earth-moving activities. No soil susceptible to seismic-induced liquefaction damage and expansive or compressible soil risk would be impacted.

D.3 Land Use and Vegetation

Project construction would require the clearing of existing non-native vegetation within the 30-acre Project Area. Disturbed areas could revegetate once Project construction is complete, although ground maintenance would occur to ensure that site vegetation does not impact power production, which would preclude regrowth of crop, forested, or shrub vegetation types. Indirect adverse effects to adjacent vegetation outside the Project Area would not be anticipated with Mana Solar, LLC's implementation of their Erosion Control Plan, which would minimize the risk of decreased plant productivity as a result of fugitive dust, soil compaction, or exposure to contaminants.

Project land is under lease to ASPA for the purposes of solar farm development. Project activities would, therefore, be compatible with planned land uses. There are no buildings present in the Project site; therefore, no residents would be displaced by Project activities.

D.4 Floodplains

While Mana Solar, LLC designed the Project to minimize environmental impacts to the extent practicable, 0.4 acres of mapped 100-year floodplain as defined by the Federal Emergency Management Agency Flood Insurance Rate Map are located within the Project site. This portion of the Project site would consist of photovoltaic arrays. Construction of Project features would not result in a change in elevation, and floodplains would be restored to preconstruction contours once construction is complete. Mana Solar, LLC's Erosion Control Plan would be followed to prevent erosion and sedimentation and protect other floodplain values.

Because the Project would not significantly alter water levels or reduce habitat in the floodplain, construction and operation of the Proposed Action is practicable. The Proposed Action is the most practicable alternative based on the proximity of the Project to ASPA infrastructure and willing

landowners to support the project. The No Action Alternative is not practicable because it fails to address the project need of contributing towards meeting American Samoa Renewable Energy Committee's renewable energy goals; thus, losing the opportunity to reduce carbon emissions.

D.5 Water Quality and Quantity

Site preparation, installation of the solar array, and installation of underground collection lines could increase sedimentation from stormwater runoff or potentially introduce contaminants into surface water resources adjacent to the Project during construction. However, the implementation of Mana Solar, LLC's Erosion Control Plan would minimize the risk of Project-related water quality impacts. Temporary disturbance areas from construction would be revegetated, which would also reduce the risk of runoff carrying sediment or pollutants to adjacent surface or groundwater would be minimized. Because no sources of drinking water are present in the analysis area, they would not be affected.

D.6 Biological Resources

Approximately 30 acres within the Project would be cleared of potential wildlife habitat for the installation of the solar farm. Given the evidence of continual cultivation and disturbance, however, the Department of Marine and Wildlife Resources (DMWR) concluded that the Project is not likely to be suitable as habitat for ESA-listed snail species and that the Project would be unlikely to have negative impacts on the populations or habitat of terrestrial ESA-listed species found in American Samoa (DMWR 2023). Indirect adverse effects to adjacent vegetation outside the Project would not be anticipated with Mana Solar, LLC's implementation of their erosion control plan, which would minimize the risk of decreased plant productivity as a result of fugitive dust, soil compaction, or exposure to contaminants. Given the presence of invasive woody species within the Project Area currently, the Project could have a beneficial impact on invasive species management due to clearing of invasive woody species.

D.7 Aesthetics

Impacts on visual resources during Project construction would primarily be associated with vegetation clearing and increased activity (e.g., the movement of vehicles and equipment), which could attract attention. During construction, the removal of vegetation and earthwork would introduce areas of exposed soil, which would contrast with the existing setting until construction is complete and vegetation has been restored. Long-term, the conversion of approximately 30 acres of existing previously agricultural lands to a solar farm would generate visual contrast through their geometric form and dark, slightly reflective surfaces, which are not common in the setting. However, the presence of existing vegetative screening that would be retained around much of the Project would help minimize this impact.

D.8 Noise

The Project would introduce additional construction equipment and worker vehicle traffic on roads in the vicinity of the Project Area, as well as construction and operational noise. However, normal attenuation of emitted noise levels and existing vegetative screening would minimize the potential for adverse noise impacts to adjacent properties.

D.9 Socioeconomics and Environmental Justice

Construction of the Project could cause temporary inconveniences to residents through increased construction noise and traffic on roads near the Project and at the construction site. Conversely, the Project could also provide a source of short-term employment for some residents during construction, as well as an increase in local spending due to local procurement of goods and services. The Project would not substantially change the population or adversely impact housing, employment, or public services. Long-term, the Project could also help offset rising prices of imported fuel and reduce health impacts associated with the combustion of diesel fuel by providing a local source of renewable energy to the grid.

The village of Pava'ia'i contains both a minority and low-income environmental justice population. However, these populations are not anticipated to be uniquely susceptible to Project impacts; risks related to climate change, routes of exposure, and cultural practices are shared by residents across the island of Tutuila.

D.10 Transportation

The Project would introduce additional construction equipment and worker vehicle traffic on roads in the vicinity of the Project Area over the roughly 4-month construction duration. However, the number of equipment and worker vehicles required would be limited and this traffic would vary in occurrence throughout the day. Anticipated traffic volume during Project operation and maintenance would have no measurable impact on existing transportation resources during the life of the Project, due to the limited number of vehicles and equipment needed and the intermittent nature of these activities.

E. PUBLIC AND AGENCY INVOLVEMENT

A local newspaper advertisement announcing the availability of the EA and participation under Section 106 of the National Historic Preservation Act was published in the Samoa News on July 2-4, 2024. A copy of the EA was available for public review at: https://www.rd.usda.gov/resources/environmental-studies/assessment/mana-solar-project. The 14-day comment period ended on July 17, 2024. RUS received no comments on the EA during the public review period.

An additional local newspaper advertisement was published in the Samoa News on July 19, 2024, informing the public of the proposed conversion of wetlands and effects to floodplains and requested comments concerning the proposal, alternative sites or actions that would avoid these impacts, and methods that could be used to minimize these impacts. The 14-day comment period ended on August 1, 2024. RUS received no comments during the public review period.

F. FINDING OF NO SIGNIFICANT IMPACT

Based on the EA, RUS has concluded that the Project will have no significant effects to air quality, geology and soils, land use and vegetation, floodplains, water resources, biological resources, aesthetics, noise, socioeconomic & environmental justice, and transportation. The Project will have no effects on historic properties listed or eligible for listing on the National Register of Historic Places and no effects to federally listed species or designated critical habitat. The Project will not disproportionately affect minority or low-income populations.

In accordance with the National Environmental Policy Act, as amended, the Council on Environmental Quality Regulations, and RD's Environmental Policies and Procedures, RUS has determined that the environmental impacts of the Project have been adequately addressed and that no significant impacts to the quality of the human environment will result from construction and operation of the Project. Any final action by RUS related to the Project will be subject to, and contingent upon, compliance with all relevant federal and state environmental laws and regulations. Because RUS's action will not result in significant impacts to the quality of the human environment, RUS will not prepare an Environmental Impact Statement for its potential federal action associated with the Project.

G. LOAN REVIEW AND RIGHT OF ADMINISTRATIVE REVIEW

This FONSI is not a decision on a loan application and therefore not an approval of the expenditure of federal funds. Issuance of the FONSI and its notice concludes RUS's environmental review process. The ultimate decision on loan approval depends upon the conclusion of this environmental review process, in addition to financial and engineering reviews. Issuance of the FONSI and publication of notice will allow for these reviews to proceed. The decision to provide financial assistance also is subject to the availability of loan funds for the designated purpose in RUS's budget. There are no provisions to appeal this FONSI or the agency's other environmental determinations. Legal challenges to the FONSI may be filed in Federal District Court under the Administrative Procedures Act.

H. APPROVAL

This Finding of No Significant Impact is effective upon signature.

Dated:

CHRISTOPHER MCLEAN Digitally signed by CHRISTOPHER MCLEAN
Date: 2024.08.02 09:57:10 -04'00'

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Contact information

For additional information on this FONSI and EA, email: RUSPublicComments@usda.gov.