Appendix D

Visual Resources Report

Visual Resources Report

Grace Solar Energy Center

DECEMBER 2025

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AC	alternating current
amsl	above mean sea level
APM	applicant proposed measure
Applicant	Grace Orchard Solar II, LLC/Next Era Energy Inc.
BESS	battery energy storage system
CEQA	California Environmental Quality Act
DC	direct current
DFA	Development Focus Area
DRECP	Desert Renewable Energy Conservation Plan
HVAC	heating, ventilation, and air conditioning
I	Interstate
KOP	key observation point
kV	kilovolt
LUPA	Land Use Plan Amendment
NEPA	National Environmental Policy Act
Project	Grace Solar Energy Center Project
ROD	Record of Decision
ROW	right-of-way
SCADA	supervisory control and data acquisition
SCE	Southern California Edison
SR	State Route
VRM	Visual Resource Management

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Executive Summary

This Visual Resources Report was prepared in support of California Environmental Quality Act (CEQA) review of the construction, operation, and decommissioning of the Grace Solar Energy Center Project (Project). The Project is a utility-scale solar photovoltaic electrical generating and storage facility that would generate and deliver renewable electricity to the statewide electricity transmission grid. The Project site is primarily located on private lands with select solar array areas and the transmission line located on U.S. Bureau of Land Management (BLM) administered land. While the Project in its entirety is evaluated against aesthetics significance criteria established in CEQA Guidelines Appendix G, Project components on BLM-managed lands are evaluated in accordance with BLM Manual 8431 – Visual Resource Contrast Rating and addressed in the Visual Resources Report specifically prepared for the BLM.

Construction of the Project would result in a temporary visual change due to the use of heavy construction equipment and increased traffic associated with worker, vendor, and haul truck trips. Decommissioning[1] is expected to generate roughly the same level of temporary visual changes as construction. During operations, Project components would be visible from higher volume vantage points (i.e., Interstate [I] 10, Key Observation Point 1); however, the design and basic characteristics of the visible components (primarily, the proposed transmission lines) would be consistent with the existing visual elements of form, line, color, and texture in the existing landscape. As viewers are placed closer to the Project site and are provided foreground views to solar panels and fencing from perimeter roads and a road bisecting the Project site, the broad, flat form and dark color of the solar panels, along with the developed and orderly look of the solar facility, would strongly contrast with the desert landscape surrounding the Project and would tend to dominate views due to the large scale of the Project and discordant forms and colors. Though the existing visual character of the Project area is already influenced by existing roads, transmission lines and neighboring energy projects, Project operations and, specifically, proposed grading and installation of solar panels and fencing in the valley landscape, would not result in substantial degradation of the existing visual character and visual quality of the Project site when viewed from proximate foreground viewing locations. Applicant Proposed Measures and mitigation would reduce visual contrast of the Project as experienced from select viewpoints during construction, operation, and decommissioning; however, these measures would not fully mitigate the significant visual impact of the Project. As such, impacts to existing visual character and quality would remain significant and unavoidable.

[1] Solar projects typically have a lifespan of 35-40 years. At the end of the Project's useful life, the Applicant could opt to decommission the facilities and remove aboveground facilities. Following decommissioning and removal, the area would be reclaimed per applicable regulations in effect at the time of decommissioning.

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1 Introduction

1.1 Project Overview

The Grace Solar Energy Center Project (Project) is a utility-scale solar photovoltaic (PV) electrical generating and storage facility that would generate and deliver renewable electricity to the statewide electricity transmission grid. As proposed, the Project's solar site would include up to 500 megawatts (MW) of PV solar generation and up to 500 MW of battery storage. The Project would also include a 161 kV transmission line and switchyard (Phase 1), a 230-kilovolt (kV) transmission line (Phase 2), collector substation, operations and maintenance (O&M) building, access roads, and collection lines. The Project is an amendment to the previously approved Palo Verde Mesa Solar Project (Approved Project), which was approved by the County of Riverside (County) in August 2017 and supported by an Environmental Impact Report (EIR No. 532). Figure 1 shows the Project location and Figure 2 show the general layout/location of Project components.

1.2 Project Location

The Project site aggregates a total of 3,705 acre and is located in eastern Riverside County (County), in southern California. The Project is located on private lands (3,310-acres) with the transmission line located on private land within the solar facility boundary under Phase 1 and on BLM-administered land (395-acres) under Phase 2. The Project site is located approximately 2 miles north of Interstate (I) 10, adjacent, on the west side to the Blythe city limits (Figure 1). The Project is bounded on the north and west sides primarily by BLM lands, to the east and south by private land. Blythe Airport is located south of the Project. There is an inactive lemon orchard located within the center of the Project boundary (Figure 2).

Buck Boulevard, a paved, non-county road north of 10th Avenue, runs through the Project boundary north of the intersection with 10th Avenue, and Stephenson Boulevard, an unpaved, non-county road, runs through the Project boundary on the project boundary north of the intersection with 10th Avenue. Buck Boulevard would be improved and used as the primary access road for the Project. Stephenson Road would provide secondary access to the Project under Phase 2. Under Phase 2, the proposed transmission line is routed west from the proposed substation and crosses Dracker Road. Dracker Road, a non-county road that runs along the west side of the Project boundary, would be the secondary access under Phase 2 to access the proposed transmission line corridor. On the west side of Dracker Road, the Phase 2 transmission line would then connect to the existing Arlington transmission line and use the open circuit of the existing double-circuit Arlington transmission line. The existing Arlington transmission line crosses Black Rock Road, a paved, county-maintained road and I-10. There are a few roads within the Project boundary, such as 9th Avenue and Keim Boulevard, that are identified by the County as a road "accepted for public use" by Riverside County. Figure 2 illustrates the location of the Project relative to access roads.

1.3 Project Description

The Project would include two phases, including Phase 1 – Solar and Western Power Administration (WAPA) Tie-In and Phase 2 – Battery Energy Storage System (BESS) and Arlington Collocation. Under Phase 1, the Project would construct the solar facility, ancillary facilities, and an approximately 3.5-mile transmission line to interconnect with the existing Parker – Blythe 161 kV transmission line owned by WAPA on private land. The Phase 1 transmission line would interconnect through a tie-in with the existing Parker – Blythe 161 kV transmission line owned by WAPA

using a new 161 kV switchyard. The Phase 1 solar facility and ancillary facilities could also utilize the Phase 2 transmission line. Under Phase 2, the Project would construct a BESS and ancillary facilities on private land and an approximately 10.5-mile transmission line to interconnect with the Southern California Edison (SCE) 230-kV Colorado River Substation located on BLM-administered land. The majority of the Phase 2 transmission line (8.6 miles) would utilize the existing open-circuit of the double-circuit Arlington transmission line; and therefore, would be located within an existing right-of-way (ROW). The 395-acre area on BLM-administered lands would be limited to the transmission line in Phase 2.

The Phase 2 transmission line is not located within a BLM Renewable Energy Corridor, and is located within a Development Focus Area (DFA) for transmission, solar, wind, and geothermal projects, as designated by the Desert Renewable Energy Conservation Plan (DRECP). The DRECP Final Environmental Impact Statement (EIS) was approved by a Record of Decision (ROD) signed on September 14, 2016 (BLM 2016a). On August 1, 2023, the BLM received a Standard Form 299 application for a BLM ROW grant from the Applicant and an amended Standard Form 299 application on September 9, 2025 to construct, operate, maintain, and decommission the transmission line, which would be located on BLM land under Phase 2. The BLM will perform a separate review of the components on BLM-administered land (CACA-106313356) under the National Environmental Policy Act (NEPA).

1.3.1 Proposed Changes to the 2017 Palo Verde Mesa Solar Project

An overview of the proposed changes of the Proposed Project to the Approved Project are listed in Table 1, below. Details of the Proposed Project components are provided in Section 2.3.

Table 1. Proposed Changes to the 2017 Palo Verde Mesa Solar Project

Project Name	Palo Verde Mesa Solar Project	Grace Solar Energy Center
Total Project Site (acres)	3,278	3,705 acres
Privately owned land (Riverside County) (acres)	3,250	3,310 acres
BLM-administered land (acres)	Limited to 28.2 acres within the ROW for the transmission line	395 acres
Solar Energy Facility	Single-axis tracking system	Single-axis tracking system
MW of Power	450 MW	500 MW
Battery Storage	None	500 MW
PV Panel Dimensions	Tracker: 295 feet long and 140 feet wide (Tracker)	Individual Panel: 7.8 feet high by 3.7 feet wide

Table 1. Proposed Changes to the 2017 Palo Verde Mesa Solar Project

Transmission line Route	East of Blythe Airport running south, south of I-10, extending west to SCE Colorado River Substation[1]	WAPA Tie-In: Starting from the proposed substation routed northeast to the north side of the lemon orchard parcel, then southeast to the Parker-Blythe WAPA line. Arlington Collocation: Starting east of Dracker Road from the proposed substation extending horizontally west of Blythe Airport, then, running south, south of I-10, extending west to SCE Colorado River Substation.
Total Transmission line (miles)	14.5	WAPA Tie-In: 3.5 Arlington Collocation: 10.5
Transmission line on site (miles)	2.7	WAPA Tie-In: 3.5 Arlington Collocation: 1.9
Transmission line off site (miles)	11.8	WAPA Tie-In: 0 Arlington Collocation: 9.6
Interconnection	Colorado River Substation	WAPA Tie-In: Parker – Blythe WAPA Line Arlington Collocation: SCE Colorado River Substation
Primary Access	Intersection of Buck Blvd. and 10th Ave.	Intersection of Buck Blvd. and 10th Ave.
Alternate Access	Intersection of Stephenson Blvd. and 10th Ave.	WAPA Tie-In: Intersection of Stephenson Blvd. and 10th Ave. Arlington Collocation: Intersection of Dracker Rd. and Black Rock Rd.
Substation/Switchyard Footprint (acres)	4.1	3.5
Substation Location	South of intersection of Dolly Street and 6th Avenue in the northeastern corner of the intersection of 10th Ave and Buck Blvd	Located on private land, west of solar array
O&M	3,500 square feet O&M building	3,500 square feet O&M building
Traffic	Construction: 1,164 trips per day Operation: 12 permanent full-time employees	Construction: 635 trips per day Operation: 6 permanent full-time employees
Water Use	Construction: Approximately 500 per year for 3 years = 1,500 AF Operation: Approximately 302 AF per year	Construction: Approximately 600 AF Operation: Approximately 2 AF per year

Notes: Western Area Power Association = WAPA; Southern California Edison = SCE; Operations and Maintenance = O&M; acre-feet = AF.

1.3.2 Project Components

The Project consists of the solar site located on private land with transmission lines located either on private land or on BLM Land. Figure 2 shows the general site layout for the Project. The proposed solar site components include the following:

- Solar field with a capacity of 500 MW
- Crystalline silicon panels or bifacial panels
- Single axis tracker components
- Direct Current (DC) to Alternating Current (AC) power inverters at each solar block
- Transformer(s)
- Battery energy storage system (BESS) with a capacity of up to 500 MW
- On-site operations and maintenance (O&M) building
- Substation (including a generator and propane tank for emergency use)
- Underground or aboveground (or a combination of both) 34.5-kV collection system
- Underground or aboveground optical ground wire (OPGW)
- Staging area (temporary) for construction trailers and construction parking
- Laydown areas throughout the Project site during construction
- Water tank adjacent to the O&M building and BESS
- Roadways consisting of internal and perimeter roads
- Access to the Project site for construction and O&M
- Integrated Supervisory Control and Data Acquisition (SCADA) system
- InWeather stations

The transmission line components include the following:

- 161 kV transmission line, approximately 52 new poles, and ancillary componentry (e.g., fiber optic cabling, cross arms, conductors, etc.) connecting the Project to the electrical grid
- Interconnection facilities connecting the Project to the existing Parker-Blythe WAPA line
- 230-kV transmission line, approximately 40 new poles, and ancillary componentry (e.g., fiber optic cabling, cross arms, conductors, etc.) connecting the Project the to the electrical grid through interconnection to the SCE Colorado River Substation
- Access road along the transmission line corridors for construction and O&M
- Communication cables or lines

Construction is anticipated to take approximately 28 months from the start of construction to completion of the Project. The construction workforce would average 50–100 employees with a maximum daily workforce of 600 employees. The operational life of the Project is anticipated to be approximately 40 years.

1.3.3 Solar Site (Private Lands)

Solar Generator

The Project would install up to 500-MW PV-system blocks to convert solar energy directly to electrical power for export to the state's electrical grid. Solar power is generated through PV modules converting sunlight striking the modules directly to low-voltage DC power, which is subsequently transformed to alternating current AC power via an inverter that is placed on site. Current technology panels are approximately 7.8 feet high (93.6 inches) by 3.7 feet wide (44.4 inches) wide. PV cells are located on panels that are on a mounting structure. The PV panel modules are mounted on steel support posts that are pile-driven into the ground.

Inverters

Within the proposed solar arrays there would be power conversion stations (PCS), also known as inverters, which would contain at a minimum one inverter and one transformer. Inverters are usually housed within an enclosed structure, which helps to reduce the resulting operational noise levels.

Electrical Collection System

The Project would require the construction of a 34.5kV collection system. Each array unit would be connected using underground 34.5 kV collection lines parallel and adjacent to the subarea access roads. Electrical collection lines would likely be installed within the access road corridor, using direct bury methods, although conduit could be used in some situations.

Battery Storage

The Project would use an up to 500-MW AC- or DC-coupled centralized BESS configuration. Selection of an AC- or DC-coupled system is ultimately determined through off-taker preference and contract terms. The BESS would include batteries housed within containers in a centralized location near the proposed on-site substation. The BESS would likely consist of containers housing batteries connected in strings and mounted on racks. The BESS would occupy approximately 23.2 acres and would include structures up to 20 feet in height.

Substation

The substation is anticipated to be located on the east side of Dracker Road, next to the Project solar panels and would cover approximately 2.6 acres. The substation would be separately fenced off from the rest of the solar project facilities and would include a switchyard component within the internal substation fence line. The fence would be a 6-foot-tall chain link fence with 1-foot-tall strands of barbed wire along the top. The substation serves to interconnect an electrical generator to the grid. The substation would convert the energy produced by the solar panels from medium-voltage (34.5 kV) to high-voltage (either 161 kV or 230 kV). It would include transformers, breakers, switches, meters, and related equipment. The substation may include a backup emergency generator for use if the regional transmission system fails. The substation would be surrounded by security fencing and locked gates to comply with electrical codes. A small control enclosure, approximately 48 feet by 14 feet and 11 feet in height, would be located nearby the substation and would be accessible to authorized high-voltage personnel only. The control building would house electrical control equipment, battery/DC systems for device operation, safety relays,

and other similar electrical equipment. This building would interconnect with the main control room in the operations building for monitoring of the substation.

Operations and Maintenance Facility and Storage Building

The Project would include an up to 3,500-square-foot O&M building with a maximum height of 20 feet. The O&M building would be constructed as a steel frame structure located on the west side of the Project site. The O&M building would support approximately six (6) full-time, onsite Project technicians. Operations would be monitored remotely via the Project's SCADA system, and periodic inspections and maintenance activities would occur. The O&M building may contain a backup generator and a propane tank for emergency use or in the event of a blackout. The O&M building would consist of staff offices, restrooms, a break room, and an office supply storage area and would include an HVAC system.

Solar Facility Fencing, Site Security, and Lighting

The boundary of the solar site would be secured by a permanent security fence with posts set in concrete. The fence would be a 6-foot-tall chain link fence with 1-foot-tall strands of barbed wire along the top. The security fence would include wildlife exclusion fencing at the bottom, specifically for desert tortoise exclusion around the perimeter of the solar facility and breakaway fencing within the 100-year floodplain. No flow obstructing fencing would be located within 100-year floodplains. Where required within the floodplain, the fencing would include galvanized fence material up to 24 inches high and 12 inches deep for desert tortoise exclusion, and either breakaway or flow through fencing. Breakaway fence design would include hog rings between the galvanized fence material and security fence intended to break away with water velocity during potential flood events. Outside of the floodplain, perimeter fencing would just include security fence above desert tortoise exclusion fencing. Desert tortoise guards would also be installed as access gates. The security fence would be installed near the start of construction before large components are brought onto the site for assembly and installation but may be preceded by mowing, vegetation clearance, and grading as required. The ingress/egress would be accessed via a locked entrance gate. Security may be enhanced with motion detectors, facility lighting, and cameras in key locations.

Nighttime lighting would be limited to areas required for operation, safety, or security. Low-elevation (less than 14-foot) controlled security lighting would be installed at primary access gates, the on-site substation, and the entrance to the energy storage structure(s). The lighting would only switch on when personnel enter the area (either motion sensor or manual activation [i.e., switch]). All safety and emergency service signs would be lit when the lights are on. Electrical power to supply the access gate and lighting would be obtained from SCE. Lighting would only be in areas where it is required for safety, security, or operations. All lighting would be shielded and directed downwards to minimize glare and illumination of the night sky or potential impacts to surrounding viewers. Off-site security personnel could be dispatched during nighttime hours or could be on site, depending on security operating needs.

The Project would use portable lighting for any emergency work that must occur on panels at night. The level and intensity of lighting during operations would be the minimum needed. Portable lighting may be used occasionally and temporarily for maintenance activities during operations and also during construction activities.

1.3.4 Transmission Line and Interconnection

The Project would include transmission line alignments, access roads, and collector line routes. The transmission lines and associated ancillary facilities, such as access roads, spur roads, and temporary construction facilities,

would either be located on private land or within a BLM authorized ROW. The transmission lines and access within the transmission line corridors would support the solar facility and/or BESS, which are located on private land.

1.3.4.1 Transmission Lines

WAPA Tie-In (Phase 1)

Under Phase 1, the 161 kV transmission line and associated access roads would be located entirely on private lands within the solar facility boundary. The WAPA Tie-In includes approximately 3.5 miles of a new 161 kV transmission line. The proposed transmission line would tie-in to the existing Parker-Blythe 161 kV transmission line owned by WAPA which is routed through the middle of the Project, paralleling Buck Boulevard. The existing 161 kV Parker-Blythe WAPA line connects from the existing SCE Blythe Substation, located approximately 1.5 miles south of the Project, to the Parker Substation, located approximately 59 miles northeast of the Project. The new transmission line would include approximately 52 new poles between the proposed substation and tie-in location.

The transmission line would use self-supportive steel monopoles ranging up to 104 feet. Typical spans between poles would be approximately 350 feet. Self-weathering non-reflective steel would be used, which is intended to blend with the surrounding landscape. New poles would either have drilled pier foundations or would be direct embed. Direct-embed excavations would range from 4 feet to 6 feet in diameter while drilled pier diameters would range from 8 feet to 11 feet in diameter.

Site Access Roads

Access to the transmission line and structure sites would be required during construction and for the long-term maintenance of the transmission line. Under Phase 1, access for the transmission line improvements and construction would occur within the solar facility boundary. Similar to the solar facility, primary access would be from Buck Boulevard and secondary access would be from Stephenson Boulevard. Existing paved and unpaved roads would be used to the extent practical, to transport material and equipment to and from the structure locations. When necessary, spur roads would run from the solar facility access roads to each structure location. Spur roads would be unpaved dirt roads located within the solar facility and used by maintenance crews and vehicles for inspection and maintenance purposes after Project construction.

Arlington Collocation (Phase 2)

Under Phase 2, the Project would utilize a 230 kV transmission line located on BLM land. The transmission line and associated access roads would primarily be located in a DRECP designated DFA and would use the existing Arlington transmission line ROWROW.

Only 1.9 miles of new poles would be required on BLM land as the transmission line would use 8.6 miles of the open circuit on the existing Arlington transmission line east of the Project boundary, for a total transmission line length of 10.5 miles. After leaving the Project substation and reaching the existing Arlington alignment, the Project transmission line would be installed on existing double circuit structures and use the previously approved McCoy/Arlington ROW Grant corridor to the extent possible. Use of the existing transmission line would reduce new disturbance areas.

The Project transmission line would use self-supportive steel monopoles. A total of 40 new or replaced poles are proposed, with heights ranging from 39 feet to 104-feet tall. The new poles nearest to the proposed substation

would be approximately 70 feet tall. Typical spans between poles would be approximately 200 to 500 feet. Self-weathering non-reflective steel would be used, which is intended to blend with the surrounding landscape. New poles would either have drilled pier foundations or would be direct embed. Direct-embed excavations would range from 4 feet to 6 feet in diameter while drilled pier diameters would range from 8 feet to 11 feet in diameter.

One section of the transmission line near Blythe Airport would require construction of four new poles to transition to a horizontal line configuration, as opposed to vertical, which allows for a lower pole height in this area. Construction of these poles were previously permitted under the McCoy/Arlington ROW Grant. Additionally, a double circuit duct bank as approved under the Arlington Solar Energy Center would be located just outside the Colorado River Substation, which would accommodate one duct bank for the Project's transmission line prior to interconnecting to the Colorado River Substation. Two new riser poles would also be installed on either side of the duct bank. Additional poles may be necessary to enter the SCE Colorado River Substation, dependent on further coordination with SCE. New temporary workspaces outside the existing McCoy/Arlington ROW would also be required to pull the line and maintain adequate safety buffers from the energized Arlington transmission line.

Site Access Roads

Access to the transmission line and structure sites would be required during construction and for the long-term maintenance of the transmission line. Under Phase 2, access for the transmission line improvements and construction would occur from Dracker Road from the north and Wiley's Well Road which would provide access to the transmission line and the Colorado River Substation, exiting from I-10 from the south. Existing paved and unpaved roads would be used to the extent practical, to transport material and equipment to and from the locations within the ROW. The Project would use the existing unpaved access road within the Arlington transmission line ROW. The transmission line access and spur roads, approximately 20 feet wide, would be constructed to provide access to each transmission pole. When necessary, spur roads would run from the access road to each structure location. Access and spur roads would be unpaved dirt roads located within the temporary construction ROW. After Project construction, the access road would be used by maintenance crews and vehicles for inspection and maintenance purposes.

1.3.5 Construction Components

A laydown yard has been preliminary identified to include approximately 8.0 acres adjacent to the BESS and collector substation. Additional temporary staging areas for material laydown including boxes of solar panels, steel, aluminum framing, conduit for underground electrical, transformers, and other Project materials may be located throughout the Project area. For collection or transmission line facilities located between array units, it is anticipated that a temporary disturbance width of approximately 200 feet would be needed for the access roads and 34.5 kV collection lines or transmission line.

1.3.6 Applicant Proposed Measures

The Applicant has committed to implementing various Applicant Proposed Measures (APMs) as part of the Project to avoid and minimize the potential effects of construction and operation on environmental resources. Therefore, the APMs are considered part of the project description. APMs applicable to aesthetics/visual resources are listed below.

- **APM-VR-1: Lighting Control.** Consistent with safety and security considerations, the Applicant will design and install all permanent exterior lighting such that (a) lamps and reflectors are not visible from beyond the Project site, including any off-site security buffer areas; (b) lighting shall not cause excessive reflected glare; (c) direct lighting shall not illuminate the nighttime sky, except for required Federal Aviation Administration aircraft safety lighting (which shall be an on-demand, audio-visual warning system that is triggered by radar technology); (d) illumination of the Project and its immediate vicinity shall be minimized; (e) skyglow caused by Project lighting will be avoided; and (f) the lighting shall comply with local policies and ordinances. All permanent light sources shall be below 2,500 Kelvin color temperature (warm white) and shall have cutoff angles not to exceed 45 degrees of nadir.
- **APM-VR-2: Surface Treatment of Project Structures/Buildings.** The Applicant will treat the surfaces of all non-temporary, large Project structures and buildings (O&M building, inverters, electrical enclosures, transmission line poles and conductors) visible to the public such that (a) their colors minimize visual contrast by blending with the characteristic landscape colors, (b) their colors and finishes do not create excessive glare, and (c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

2 Regulatory Setting

2.1 Federal

2.1.1 National Environmental Policy Act

There are several applicable regulations, policies, and procedures that pertain to visual resources. The Council on Environmental Quality regulations for implementing the National Environmental Policy Act (NEPA) identify aesthetic effects as a type of impact to be addressed in NEPA reviews, which should include discussion of the design of the built environment (40 CFR 1502.16, 1508.1). The regulations also require discussion of possible conflicts of a proposed action with the objectives of federal, regional, state, local, and tribal land use plans and policies, such as those pertaining to management of visual resources. The Council on Environmental Quality regulations do not include more specific direction about aesthetic impact issues to be considered or specify a means for evaluating aesthetic impacts. A separate Visual Resources Report has been prepared to support the NEPA document prepared for the Project.

2.1.2 Federal Land Policy and Management Act

The Federal Land Policy and Management Act of 1976 mandates the management of public lands including the identification and protection of their scenic quality and values (43 USC 1701 et. seq., including Sections 102[a][8], 103[c], and 201[a]), while allowing for multi-use. ROW grants on federal lands must contain terms and conditions that would minimize damage to scenic quality and aesthetic values (Section 505[a]). BLM consideration of visual resource issues associated with ROW grants is generally based on the visual resource provisions of standard BLM policies and procedures developed for land use planning and NEPA compliance.

The BLM uses a Visual Resource Management (VRM) system, defined in BLM Manual 8400, to classify visual values of landscapes on federal lands, adopt management objectives to either preserve existing conditions or allow for different levels of modification, and evaluate if land use decisions would conform or conflict with the adopted management objectives (BLM 1984). Visual values are first evaluated by completing a Visual Resource Inventory process according to the guidelines in BLM Manual Handbook H-8410-1 (BLM 1986a) (refer to Section 3.5, Visual Character and Quality, for a description of the Visual Resource Inventory process). Four different VRM classes are then assigned to landscapes through the BLM's Resource Management Plan process that define management objectives for visual conditions regardless of the values identified during the Visual Resource Inventory process. Lands outside of the BLM's jurisdiction are not assigned a VRM class, and federal lands that have no assigned VRM class are considered VRM Class IV by default.

The following VRM classes and objectives have been established in BLM Manual 8400 (BLM 1984):

- **Class I:** The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
- **Class II:** The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract

the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

- **Class III:** The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
- **Class IV:** The objective of this class is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Projects on BLM-administered land that would result in physical landscape changes must be evaluated to determine if the changes would conform or conflict with the BLM's adopted VRM classes for the area. The BLM maintains a geographic information system dataset of adopted VRM classes for federal lands, which is periodically updated to reflect the BLM's recent Resource Management Plan amendments and land use decisions. The BLM's current VRM classes assigned to the Project area and surrounding region are shown on Figure 3, VRM Classes in the Project Area. Components of the Project on BLM-managed public lands (i.e., the transmission line) are entirely within VRM Class IV lands.

2.1.3 Western Solar Plan

On December 19, 2024, BLM signed the 2024 Solar PEIS ROD (also known as the Western Solar Plan) (BLM 2024a), which amended resource management plans across 11 western states in service of modifying its current solar energy program under the Approved Resource Management Plan Amendments/ROD for Solar Energy Development in Six Southwestern States (BLM 2012; the 2012 Western Solar Plan). The 2024 Solar PEIS ROD and associated resource management plan amendments were preceded by a robust environmental evaluation through the preparation of the Final Programmatic Environmental Impact Statement and Proposed Resource Management Plan Amendments for Utility-Scale Solar Energy Development (Solar Programmatic EIS) (BLM 2024b). The Solar Programmatic EIS analyzed a range of alternatives representing different options for addressing land use allocations for utility-scale solar PV projects, permitting processes, and Programmatic Design Features (PDFs). The Solar Programmatic EIS evaluated the environmental, social, and economic impacts of those alternatives and BLM's proposed action in accordance with federal laws and regulations listed in the 2024 Solar PEIS ROD. In addition to approving the resource management plan amendments to existing BLM land use plans, the 2024 Solar PEIS ROD adopted new land use allocations and incorporated updated PDFs for utility-scale solar development as described under the Approved Plan in Section 3.1 of the 2024 Solar PEIS ROD.

The BLM adopted programmatic design features for visual resources as part of the ROD, including VRM best management practices, procedures for coordinating with BLM staff during the project application process, evaluating visual resources, analyzing potential visual effects, and avoiding or minimizing potentially significant effects. The specific programmatic design features from the Final Solar PEIS ROD for the Western Solar Plan applicable to visual resources and the Project are included in Appendix B.

2.1.4 Californian Desert Renewable Energy Conservation Plan

In November 2008, pursuant to an executive order by the governor of California, multiple federal and California state agencies formed the Renewable Energy Action Team to, among other things, develop the DRECP to address renewable energy and species conservation concerns over approximately 22.5 million acres of federal and non-federal lands in the Mojave and Colorado Desert regions of California. The purpose of the DRECP is to conserve and manage plant and wildlife communities in the desert regions of California while streamlining the permitting of compatible renewable energy projects. The Draft DRECP was published in September 2014. In March 2015, the Renewable Energy Action Team announced that completion of the DRECP would follow a phased approach, with the first phase consisting of 10 million acres of lands managed by BLM. In completion of the first DRECP phase, BLM published its ROD and final Land Use Plan Amendment (LUPA) to the California Desert Conservation Area Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan (DRECP LUPA ROD and DRECP LUPA) in September 2016. Out of the approximately 10 million acres of BLM-managed public lands in the Mojave and Colorado Desert regions of California, the DRECP LUPA designates approximately 388,000 acres as DFAs for solar, wind, and geothermal projects, like the Solar Energy Zones under the Western Solar Plan.

Select components of the Project are located on federal lands administered by the BLM California Desert District, Palm Springs-South Coast Office, under the California Desert Conservation Area Plan, as amended by the DRECP LUPA. The transmission line segments on BLM managed land (a few panel areas) are located within a DFA (BLM identified areas within the California desert that would be appropriate for renewable energy development), as designated by the DRECP Final Environmental Impact Statement/Environmental Impact Report and approved by a ROD signed on September 14, 2016. A majority of the Phase 2 transmission line (8.6 miles) would use the existing open-circuit of the double-circuit Arlington transmission line and therefore would be within an existing ROW. The Project site is also located within the Riverside East Solar Energy Zone, which is a DFA under the DRECP.

2.2 State

2.2.1 California Scenic Highway Program

Many state highways are in areas of outstanding natural beauty. California's Scenic Highway Program was created by the legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The state laws governing the Scenic Highway Program are found in the California Streets and Highways Code, Sections 260 through 263. The State Scenic Highway Program includes officially designated state scenic highways, eligible state scenic highways, and historic parkways.

There are no officially designated state scenic highways within the vicinity of the Project site. The nearest highway included in the State Scenic Highway System Map, State Route (SR) 62 (an eligible state scenic highway), is located approximately 29 miles north of the Project site.

2.2.2 California Building Code Title 24 Outdoor Lighting Standards

The requirements of the state's Title 24 outdoor lighting standards vary according to which "Lighting Zone" the equipment is in. The standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on which Lighting Zone the project is located in. Existing outdoor lighting systems

are not required to meet these lighting power allowances. However, for each outdoor lighting application that is regulated by the standards, alterations that increase the connected load or replace more than 50% of the existing luminaires must meet the lighting power allowances for newly installed equipment. The standards base the lighting power that is allowed on how bright the surrounding conditions are. The eyes adapt to darker surrounding conditions, and less light is needed to properly see; when the surrounding conditions get brighter, more light is needed to see. The least power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4.

By default, government designated parks, recreation areas, and wildlife preserves are Lighting Zone 1; rural areas are Lighting Zone 2; and urban areas are Lighting Zone 3. Lighting Zone 4 is a special use district that may be adopted by a local government.

2.3 Local

2.3.1 County of Riverside General Plan

2.3.1.1 Circulation Element

As depicted on Figure C-8, Scenic Highways, in the County's Circulation Element, I-10 is a County Eligible Scenic Highway. The County has adopted a policy that addresses preservation of scenic routes provided below (County of Riverside 2020).

> Policy C 19.1. Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan.

2.3.1.2 Land Use Element

According to the County's Land Use Element, the abundant natural visual resources of Riverside County include low-lying valleys, mountain ranges, rock formations, rivers, and lakes (County of Riverside 2021a). To conserve scenic resources in the County and along designated scenic highways (eligible or officially designated state or County scenic highways), the County has adopted the following policies:

> Policy LU 4.1. Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:
>
> a. Compliance with the design standards of the appropriate area plan land use category.
> b. Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent codes and regulations.
> c. Require that an appropriate landscape plan be submitted and implemented for development projects subject to discretionary review.
> d. Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought tolerant landscaping, and water recycling, as appropriate.
> e. Locate site entries and storage bays to minimize conflicts with adjacent residential neighborhoods.
> f. Mitigate noise, odor, lighting, and other impacts on surrounding properties.

g. Preserve natural features, such as unique natural terrain, arroyos, canyons, and other drainage ways, and native vegetation, wherever possible, particularly where they provide continuity with more extensive regional systems

Policy LU 7.4. Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.

Policy LU 9.1. Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.

Policy LU 14.1 Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.

Policy LU 14.3 Ensure that the design and appearance of new landscaping, structures, equipment, signs, or grading within Designated and Eligible State and County scenic highway corridors are compatible with the surrounding scenic setting or environment.

Policy LU 14.5. Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.

Policy LU 14.8. Avoid the blocking of public views by solid walls.

Policy LU 30.8. Require that industrial development be designed to consider the surroundings and visually enhance, not degrade the character of the surrounding area.

2.3.1.3 Multipurpose Open Space Element

As defined in the County's Multipurpose Open Space Element, scenic resources include areas that are visible to the general public and considered visually attractive (County of Riverside 2015). In addition to scenic corridors, scenic resources include "natural landmarks and prominent or unusual features of the landscape" (County of Riverside 2015). Lastly, the County defines scenic vistas as "points, accessible to the general public, that provide a view of the countryside" (County of Riverside 2015).

The Multipurpose Open Space Element includes the following policies that seek to protect and maintain resources in corridors along scenic highways:

Policy OS 20.2. Prevent unnecessary extension of public facilities, services, and utilities, for urban uses, into Open Space-Conservation designated areas.

Policy OS 22.1 Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses.

Policy OS 22.4 Impose conditions on development within scenic highway corridors requiring dedication of scenic easements consistent with the Scenic Highways Plan, when it is necessary to preserve unique or special visual features.

Policy OS 22.5 Utilize contour grading and slope rounding to gradually transition graded road slopes into a natural configuration consistent with the topography of the areas within scenic highway corridors.

2.3.2 Palo Verde Valley Area Plan

Private lands within the boundary of the Project site are within the County's Palo Verde Valley Area Plan (County of Riverside 2021b). The Palo Verde Valley Area Plan contains policies regarding scenic highways. The following policy is applicable to the Project.

Policy PVVAP 10.1. Maintain Protect the scenic highways in the Palo Verde Valley planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.

2.3.3 County of Riverside Ordinance No. 655 -Light Pollution Ordinance

The intent of the County's Light Pollution Ordinance is to restrict the permitted use of certain light fixtures from emitting undesirable light rays into the night sky, which has a detrimental effect on astronomical observation and research. The Light Pollution Ordinance establishes Zone A and Zone B for purposes of lighting regulation enforcement. Development within Zone A is subject to more stringent lighting regulations, as this area encompasses lands within a 15-mile radius centered on Palomar Observatory. Development within Zone B is subject to less stringent measures as Zone B includes lands greater than 15 miles away from Palomar Observatory. Within both Zones A and B, low pressure sodium lamps are preferred and all non-exempt outdoor light fixtures must be shielded (County of Riverside 1988). Regarding Class II (i.e., parking lot, walkway, security) lighting, lighting above 4,050 lumens is prohibited in both zones. The Project site is located in Zone B.

3 Environmental Setting

3.1 Project Site

The Project site is located along the western edge of the Colorado Desert, within the Colorado River Valley, west of the City of Blythe and east of the community of Desert Center. The Colorado River Valley extends from the Rocky Mountains in Colorado to the Colorado River Delta in the northern Gulf of California. The elevation of the Colorado River Valley ranges from less than 250 feet above mean sea level (amsl) at the southwest extent of the Colorado River to approximately 8,000 feet amsl at the northeast extent of the Colorado River. The surrounding mountains rise to more than 14,000 feet amsl at the northeast extent and 2,000 amsl at the southwest extent.

The topography of the Project site generally slopes to the southeast toward the McCoy Wash. Ground surface elevations at the Project site range from approximately 330 feet amsl to 480 feet amsl. The Project site is located near existing solar development and transmission infrastructure. Land uses near the Project site include transportation (Blythe Airport (located approximately 1.5 miles to the northeast of the proposed Phase 2 transmission line crossing of I-10) and I-10), agricultural, renewable energy, electrical transmission lines, and unprogrammed recreational and wilderness areas. As measured from Orchard Lane, the community of Mesa Verde is located approximately 1.2 miles east of the proposed Phase 2 transmission line segment to the south of I-10. In addition to residential uses in the community of Mesa Verde, there is a residence north of the Project boundary along 5th Avenue and an RV resort (Rancho Ventana RV Resort) approximately 1.4 miles east of the Project boundary and along Arrowhead Boulevard. Other nearby community resources include a gas station north of the community of Mesa Verde and I-10 off Mesa Drive, Palo Verde College approximately 0.5 mile east of the Project boundary and along 6th Avenue, and the Blythe Municipal Golf Course that is adjacent to the Rancho Ventana RV Resort. Further there is non-irrigated, fallow agricultural land and an inactive lemon orchard within the Project boundary (non-irrigated fallow agricultural land is also adjacent to the area). Additionally, vacant, undeveloped land is scattered around the Project area, including the McCoy Wash which is a seasonal streambed. Undeveloped lands in this area generally include native creosote scrub. Lastly, at the proposed Phase 2 transmission line crossing of I-10, the westerly Blythe city limits are approximately 3.5 miles to the east.

3.2 Surrounding Area

The Project site is located near existing solar development and transmission infrastructure. Blythe, McCoy, and Arlington Solar Projects are all owned by NextEra and are located north of the Project. The Project transmission line would use 8.6 miles of the open circuit on the existing double circuit Arlington transmission line to interconnect with the existing Colorado River Substation. NRG Blythe II, also known as Blythe Airport Solar, and Blythe PV Project, also known as Blythe 21 Solar, are owned by Clearway Energy Group LLC and located south of the Project. Blythe Mesa Solar Project is owned by Blythe Mesa Solar II LLC and is also located south of the Project. Desert Quartzite, owned by Desert Quartzite LLC (EDF Renewables), and Crimson Solar, owned by Sonoran West Solar Holdings LLC (Recurrent Energy), are recently approved projects that would be located southwest of the Project. The distances from each of these sites to the Project site are listed in Table 1, below. Figure 4, Energy Projects Along I-10, shows the Project in relation to other existing, approved, and proposed solar development projects in the area.

Table 1. Energy Projects in the Surrounding Area

Project Name	Status	Direction from Project Site	Approximate Distance from Project Boundary to Surrounding Projects
Blythe Solar Power Project	Existing	North	Directly adjacent
Blythe Mesa Solar	Existing	South	Directly adjacent
Crimson Solar	Approved	Southwest	Directly adjacent (to the proposed Phase 2 transmission line near the Colorado River Substation)
McCoy Solar Energy Project	Existing	Northwest	2.1 miles
Arlington Solar Energy Project	Existing	Northwest	3.2 miles (Project proposes to use the existing open-circuit of the double-circuit Arlington transmission line for the majority of the proposed Phase 2 transmission line)
Calypso Solar	Existing	South	3.5 miles (to the southeast of the proposed Phase 2 transmission line interconnection at the Colorado River Substation)
NRG Blythe II (Blythe Airport Solar)	Existing	South	0.2 miles
Blythe PV Project (Blythe 21 Solar)	Existing	South	3.6 miles
Desert Quartzite Solar	Approved	South	4.2 miles (3.4 miles (to the southeast of the proposed Phase 2 transmission line interconnection at the Colorado River Substation)

3.3 Scenic Vistas

There are no designated scenic vistas in the County General Plan or the Palo Verde Area Plan nor are there any designated scenic vistas on nearby public lands managed by the BLM (or other agencies). While not designated as scenic vistas, the surrounding terrain, including ridgelines, is valued for providing a scenic backdrop for the region (County of Riverside 2021b). In addition, as described previously, the Palo Verde Mesa is surrounded by mountainous terrain, and as such, elevated slopes and ridgelines support potential scenic vistas offering unobstructed and panoramic views of the surrounding area. Despite this potential, formal trails in these mountainous areas are generally non-existent, as are nearby staging areas for recreationists to access the mountain terrain.

3.4 Scenic Highways and Scenic Resources

In the region and from SR-62 to the Colorado River, I-10 is a County eligible scenic highway but is neither an eligible nor a designated state scenic highway (County of Riverside 2020). At its closest point, the Project site is located approximately 3.5 miles north of I-10. Northerly views from the interstate as motorists approach and pass the Desert Center area include low tan and muted green covered terrain intermixed with areas of exposed, tan soils; tall rust colored poles supporting electrical transmission lines; desert washes (occasionally); irrigated (i.e., green) landscaping near the Lake Tamarisk area; distant and dark rectangular forms (solar arrays); the remaining undeveloped valley floor; and dark and visually prominent mountains in the background. The nearest facility of the California Scenic Highway System, SR-62 (an officially designated state scenic highway), is located approximately 20 miles to the north of the Project site; due to intervening terrain, views to the western extent of Chuckwalla Valley do not extend to motorists traveling on SR-62. In addition, there are no scenic resources including trees, rock outcroppings, or historic buildings on the Project site.

3.5 Visual Character and Quality

The existing visual character and quality of the 3,705-acre Project site and immediate surrounding area is generally composed of a relatively flat and undeveloped desert landscape that supports a sparse to irregular distribution of low shrubs of subdued tans, browns, and drab/muted greens. The topography of the Project site generally slopes southeast toward the McCoy Wash, from approximately 330 feet amsl to 480 feet amsl, and there is an inactive lemon orchard generally in the center of the Project site. The Project site's valley landscape is generally indistinct from other locations in the Chuckwalla Valley and is visually submissive to prominent mountain terrain that provides a scenic backdrop of visual interest.

Furthermore, land uses near the Project site include transportation (I-10 and Blythe Airport), agricultural, renewable energy, electrical transmission lines, and unprogrammed recreational and wilderness areas. Vacant and undeveloped land is scattered around the Project area, and there is non-irrigated, fallow agricultural land within the Project boundary and adjacent to the area.

3.5.1 Viewshed and Visual Analysis Area

The visual environment can be vast; therefore, for purposes of analyzing impacts, boundaries are established. The area within those boundaries is commonly referred to as the viewshed. A viewshed is composed of all the surface areas visible from an observer's viewpoint and within a defined study area. A viewshed for this Project was prepared using geographic information system software and depicts potential/theoretical areas of Project visibility within a 15-mile radius centered on the Project. The raster of theoretical visibility is shown on Figure 5, Viewshed Analysis, and is based on existing terrain and an assumed Project component height of 14 feet amsl for solar arrays (i.e., the primary project component). The viewshed does not account for or consider potential screening associated with vegetation or existing structures, including development, that may occur between a given location or a representative vantage point including selected key observation points [KOPs]). It should also be noted that while project features other than solar panels (BESS, project substation, switchyard, O&M building, and transmission lines) would be visible to the public, the potential visibility of these specific features is not illustrated in Figure 5.

The viewshed analysis results identify areas as "visible" where there is a higher potential for views of the proposed solar arrays within the 15-mile analysis area, whereas areas that are not identified as visible indicate where there

is a lower or no potential for views. Actual visibility and whether the Project features would be noticeable or draw viewer attention in the landscape depends on various factors, including visibility conditions (e.g., lighting, air quality, weather), angle of view (e.g., relative viewer position and view orientation), duration of view (in time or distance), and scale and spatial relationship (degree of contrast) of the Project (BLM 1984, 1986b).

3.5.2 Key Observation Points

The study of visual conditions, viewer experience, and viewer response involves identifying and selecting KOPs. These KOPs adhere to BLM guidelines, emphasizing commonly traveled routes or other likely observation points around projects, as outlined in BLM Manual 8431. The KOPs were selected by Dudek following review of the Project layout and were established to capture locations with potential views to various areas of the Project site and various Project components. For further details, refer to Table 2, which outlines viewer categories and their characteristics, along with locations and proximity to the Project site. The five KOPs selected for analysis are depicted on Figure 6, Key Observation Points.

Table 2. Key Observation Points

KOP	KOP Location	Latitude	Longitude	Elevation (ft)	Distance from Project Site (Approximate)	Represented Viewer Categories
KOP 1	I-10 (Eastbound)	33°36'31.50"N	114°45'17.73"W	410	420 feet from interstate span of existing Arlington transmission line	Regional travel route
KOP 2	Dracker Drive	33°38'44.01"N	114°45'9.83"W	470	130 feet from Arlington transmission line and Phase 2 transmission line alignment (0.50 miles from Project's Phase 1 transmission line alignment east of Dracker Drive)	Local travel route Recreational travel route
KOP 3	5th Avenue	33°40'5.08"N	114°41'33.25"W	405	205 feet from Project site's northern boundary	Local travel route
KOP 4	6th Avenue	33°39'38.35"N	114°39'32.51"W	400	1 mile from Project boundary/site	Local travel route Recreational travel route
KOP 5	Buck Boulevard	33°37'55.54"N	114°41'1.77"W	380	175 feet from Project	Local travel route

Table 2. Key Observation Points

KOP	KOP Location	Latitude	Longitude	Elevation (ft)	Distance from Project Site (Approximate)	Represented Viewer Categories
					boundary/site (Buck Boulevard is proposed as the primary access into the site)	Recreational travel route

3.5.2.1 KOP 1 – Interstate 10 (Eastbound)

KOP 1 is located on the paved shoulder of eastbound I-10, approximately 1.6 miles west of exit 232 (Airport/Mesa Drive) and approximately 400 feet west of the Arlington Solar Energy and Blythe Solar Energy transmission line that spans I-10. The view at KOP 1 is oriented to the east along the interstate corridor and towards the Phase 2 transmission line spans of the interstate (four tall and dark tubular steel poles supporting the transmission lines are visible in the KOP 1 view) (see Figure 7, Key Observations Points 1 and 2: Existing View). The existing landscape is mostly flat in the foreground but the dark and distant silhouettes of serval mountain ranges are visible in the background to the northeast and east. Due to the proximity of the transmission line poles to KOP 1 and the flat form and line of the interstate corridor and adjacent terrain, as well as the mostly low form and subtle line of visible vegetation, the poles are visually prominent in the view and attract the attention of passing motorists. Beyond the dark grey and broken and continuous white lines of the interstate travel lanes, tans, greys, and dull greens are the characteristic colors present in the landscape.

3.5.2.2 KOP 2 – Dracker Drive

Located on the paved segment of Dracker Drive approximately 0.45 miles south of the nearest solar arrays of the Blythe Solar Energy Project, KOP 2 is oriented to the north and extends to the distant mounded occasionally flat to rugged mountains that are approximately 15 miles away (see Figure 7). As at other KOPs, the visible foreground terrain is flat and composed of slightly granular to smooth tan/grey soils and scattered shrubs of varying coverage (foliage is typically dulled green but also dried tan). Two existing transmission lines are visible, one supported by greyish tubular steel poles and the other by darkish tubular steel poles, and parallel Dracker Drive on the west.

Note that Dracker Drive is proposed as a secondary access road into the Project site under Phase 2. See Figure 2.

3.5.2.3 KOP 3 – 5th Avenue

The south oriented view from KOP 3 extends across mostly flat but softly undulating desert valley landscape featuring numerous tufts of low golden grasses and scattered tan to grayish shrubs (see Figure 8, Key Observation Points 3 and 4: Existing View). Rows of indistinct and tall trees (or shrubs) are visible and create a low horizontal line and rectangular form in the foreground-middleground (the features are located approximately 0.50 miles away). A narrow, mostly horizonal dirt road is visible in the right extent of the photo and the silhouette of a dark rugged mountain range forms the backdrop to the view. Faint to distinct vertical lines associated with wood poles and wood H-frame structures supporting transmission lines are presented in the foreground-middleground.

3.5.2.4 KOP 4 – 6th Avenue

Located at the end of the paved extents of westbound 6th Avenue, KOP 4 looks across a broad, mostly undeveloped and flat desert landscape composed of loose tan soils and low scattered shrubs of varying density to a broad, rugged, low to high collection of mountains (see Figure 8). With the exception of the partially visible electrical distribution line and miscellaneous refuse in the immediate foreground, the viewshed is generally free of visible development.

3.5.2.5 KOP 5 – Buck Boulevard

KOP 5 is located on the unpaved portion of Buck Boulevard, just north of the solar field of the Blythe Mesa Solar Project and approximately 1 mile north of West Chanslor Way. At KOP 5, the wide and granular surface of unpaved Buck Road occupies the immediate foreground and transitions to seemingly soft and flat tan desert soils at and beyond the road edges (see Figure 9, Key Observation Point 5: Existing View). The flat terrain extends north to the base of a series of light to dark grayish rugged mountains. Visible vegetation is variable in height but mostly low and presents dull to darker green tones and a generally scattered distribution. A white, rectangular marker/sign is visible to the north and an existing transmission line supported by wooden H-frame support structures parallels Buck Boulevard. Lasty, a collection of nearly indistinct, low, and boxy structures is visible to the northeast.

3.6 Light and Glare

The Project site is currently vacant, and as such, there are no existing lighting sources on site. While the surrounding area is mostly undeveloped, there is an existing residence on 5th Avenue north of the Project site and there are a group of residences southeast of the Project site off West Chanslor Way. In addition, the Blythe Solar Power Project and the Blythe Mesa Solar Project are north and south of the Project site, respectively. Further, the Blythe Airport is approximately 1.15 miles southwest of the Project site (solar array facility) boundary. Each of these facilities is expected to include exterior lighting sources for general illumination and/or safety and security. Overall, these outdoor lights are assumed to be generally muted and not a substantial source of night lighting. At night, vehicle headlights on surrounding roadways are also sources of light, although, due to the site's remote location, vehicles would generally not be within view of the Project site.

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4 Impact Analysis

4.1 Visual Simulation

Visual simulations are included and used in this analysis to represent the relative scale and extent of change to the existing visual environment anticipated to occur due to Project implementation. Visual simulations were prepared from representative vantage points (KOPs) in the surrounding area and depict the Project at completion of construction. Visual simulations include existing site photographs as background images and true-scale 3D models of the Project rendered onto the existing photographs. Background photographs were taken during the June 2024 site visit conducted by Dudek from selected KOPs. Using available topography, a 3D surface was created for the existing terrain then imported into 3ds Max. This 3D surface was used to camera-match the background photos to the terrain model. 3D models were then created for all proposed facilities that would be visible from the selected KOPs. The visual simulations present an estimated real view to the Project that would be experienced by the public from a publicly accessible location.

4.2 Visual Contrast (Components on Federal Lands)

The analysis presented in this Visual Resources Report for Project components on BLM-managed lands is based on BLM's visual contrast rating system (BLM 1986b), in which a proposed action (i.e., the Project) is analyzed for its anticipated contrasts with features (i.e., landform, vegetation, development) within the existing landscape. The contrast is measured by comparing a project's features with the major features in the existing landscape, and more specifically, the form, line, color, and texture presented by major features. This assessment process provides a means for determining visual impacts and identifying measures to mitigate these impacts. At each KOP for Project components on BLM-managed lands, both the existing landscape and the Project's effect on the landscape are characterized using BLM's Visual Resources Contrast Rating Manual (Manual 8431) (BLM 1986b).

In addition to the major landscape features and character elements that are assessed in the visual contrast rating forms, elements that are considered in visual contrast evaluations include screening of a project's components by intervening vegetation, landforms, and development; placement of structures relative to existing vegetation, landforms, and other structures; viewing angle and orientation relative to a project; distance between a viewer and a project; view exposure/duration; atmospheric conditions; frequency of use/number of viewers at a KOP; and relative or apparent scale of a project. Once the degree of anticipated contrast is determined (contrast is described as either strong, moderate, weak, or none), a conclusion on the overall level of visual change and effect is presented (ranging from very low to high). Lastly, a determination of a project's conformance with the VRM Class Objectives is provided. Visual contrast rating forms for the proposed Project are provided in Appendix B to this Visual Resources Report. Because only KOP 1 and KOP 2 focus on a Project component (i.e., co-located Phase 2 transmission line) situated on BLM-managed lands, contrast rating forms have been prepared for KOPs 1 and 2 only.

Under the BLM's VRM system, an adverse visual effect occurs within a public view when (1) an action/project perceptibly changes existing features of the landscape such that they (landscapes) no longer appear to be characteristic of the subject locality or region, (2) an action introduces new features to the landscape that are perceptibly uncharacteristic of the region or area, and/or (3) aesthetic features of the landscape are blocked or obscured by Project components/features/activities. Uncharacteristic changes are those that are perceived as out

of place, discordant, or distracting, and the severity of a visual impact depends on how noticeable the change or contrasts may be.

In accordance with BLM guidelines (BLM 1986b), visual contrast is defined as follows:

- **None**. The element contrast is not visible or perceived.
- **Weak**. The element contrast can be seen but does not attract attention.
- **Moderate.** The element contrast begins to attraction attention and begins to dominant the characteristic landscape.
- **Strong**. The element contrast demands attention, would not be overlooked, and is dominant in the landscape.

The contrast rating results for the Project are summarized in Table 4.

4.3 California Environmental Quality Act (Components on Private/County Lands)

4.3.1 Scenic Vistas

For purposes of this report, scenic vistas are considered formally designated public vantage points offering views of primarily natural settings containing recognized scenic features or landscapes of special importance. As stated in Section 3.3 above, unincorporated Riverside County has no designated scenic vistas, including in the general Project area.

The concepts of view blockage, interruption, and degradation are used to determine the severity of potential impacts to a scenic vista. If views from public vantage points across a project site include recognized scenic features, project components are examined to determine the likelihood for view obstruction (i.e., view blockage), view interruption (i.e., intrusion on available view due to contrasting features), or degradation (i.e., decline in scenic quality).

4.3.2 Scenic Highways

Scenic highways include those state facilities that have been officially designated or nominated for official designation through eligible status by the California Department of Transportation. If a project site is located within the viewshed of a scenic highway, then the potential for impacts to scenic highways is informed by the presence of existing scenic resources on the project site, project plans to avoid/protect or disturb existing scenic resources, and the visibility of scenic resource disturbance from an officially designated or eligible state scenic highway. Pursuant to California Environmental Quality Act (CEQA) Appendix G Guidelines, scenic resources include trees, rock outcroppings, and historic buildings and may also include locally recognized scenic resources including oak trees, vineyards, and rolling hills.

As noted previously, I-10 is not a designated state scenic highway. No views of the Project site are available from SR-62, the nearest roadway included in the state scenic highway system.

4.3.3 Visual Character and Quality

Impacts to existing visual character and quality are determined through a comparison of pre- and post-development conditions on the Project site. Specifically, the project type, scale, mass, bulk, and color (and other attributes/characteristics) are examined for potential contrast with existing on- and off-site features in the area.

4.3.4 Lighting and Glare

The potential for lighting and glare impacts are evaluated based on a comparative review of pre- and post-development lighting and glare sources operating in the Project area. If a project in an urban or developed area currently contains existing nighttime lighting and glare sources, then the likelihood for a project with comparable lighting to result in significant light and glare impact is low (assuming the installation of standard control measures). On the other hand, if a dissimilar project with excessive or unusually bright lighting is implemented in a low-lighting rural environment, then the likelihood for potentially significant light and glare impacts would be high.

A Project-specific glare analysis has been prepared, and the results of the analysis are summarized below in Section 5.2.4. In addition, the Project-specific glare analysis is presented as Appendix C, Glare Analysis Report.

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5 Analysis of Project Effects

5.1 Contrast and Conformance with BLM Management Objectives

The Project's visual impacts were evaluated to determine if Project components located on BLM managed lands (i.e., the transmission line) would conform with VRM Class IV objectives as defined in the California Desert Conservation Area Plan, as amended by the DRECP LUPA.

5.1.1 Construction

During construction, craft workers/contractors, management employees, and non-craft construction personnel are anticipated to be on site. Construction of the entire Project is anticipated to occur over a 28-month timeframe. Generally, construction work schedules are expected to be 10 hours per day 7 days a week, with shifts beginning as early as 6:00 a.m. and ending as late as 6:00 p.m.. Additionally, to meet schedule demands or to reduce impacts, it may be necessary to work early mornings, evenings, or nights during certain construction phases. The work schedule may be modified throughout the year to account for changing weather conditions (e.g., changing to night work in the summer months to avoid work during the hottest part of the day for health and safety reasons). The Project would use restricted nighttime lighting during construction. Lighting would include only what is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the construction area.

Generally, construction of most Project features would be partially to fully obscured from high volume public view areas due to distance from public vantage points (e.g., roadways) and partial screening associated with intervening desert vegetation and development. For example, construction activities on the solar facility site would be screened from view of I-10 motorists by interstate road barriers, nearby vegetation, and, occasionally, intervening development. The distance between I-10 and the solar facility site (1.75 miles or greater) would also aid in the lack of clear views to construction activities on the solar facility site. The clearest views to construction activities on the Project site would be from public roads along the perimeter of or between individual blocks of proposed solar development on the Project site (i.e., KOPs 3 and 5). Construction activities, equipment, and vehicles for the various Project components would also be visible from KOPs at varying levels of clarity.

Construction activities would disturb the ground surface by removing on-site vegetation and grading underlying soils. Anticipated surface disturbances would affect existing views and visual character by altering the existing site appearance through the creation of large areas of exposed soils with a relatively smooth texture and light tan color (texture and color contrast with adjacent undeveloped desert lands would occur). Further, site development would affect existing visual character through removal of remaining vegetation/vegetative material from the Project site and the creation of hard lines/edges at Project boundary extents (i.e., the hard line would result from vegetation removal and scraping of topsoil for purposes of creating a level site). The hard lines would create a contrast when experienced against unaltered off-site lands. Construction activities, specifically the movement of vehicles and operation of equipment across the site, would generate dust that could result in reduced atmospheric clarity and view quality. However, dust generation would be reduced by application of water or other dust suppressing techniques across the site.

From KOPs 1 and 2 (I-10 eastbound and Dracker Drive), the movement of vehicles and operation of equipment along nearby segments of the proposed Phase 2 transmission line would be visible. Specifically, the stringing and pulling of new conductor on existing transmission line structures/poles via bucket trucks would be briefly visible as motorists approach the proposed transmission line span from the east and west (I-10) or travel north and south along Dracker Drive near the Project site. Construction activities on the solar facility site may also be visible from northbound Dracker Drive as motorists approach the existing Arlington Solar Energy Project; however, the nearest Project components (i.e., substation and BESS) would be located over 1.6 miles from the road. In addition to mobile views from Dracker Drive being fleeting, construction activities located approximately 1.6 miles away would be partially obscured by distance and construction vehicles and Project components/equipment would lack scale and/or spatial dominance in the broad desert landscape.

At KOPs 3 and 5 (5th Avenue and Buck Boulevard), clear views to construction activities on the solar facility sites would be available. Construction vehicles and equipment would be in the immediate foreground/middleground of the landscape elements. Vegetation removal (site preparation), the installation of fencing, grading and earthwork, PV panel installation, and Phase 1 transmission line (WAPA Tie-In) pole installation would substantially modify the existing landscape visible from KOPs 3 and 5. From these specific vantage points, visible contrast in the landscape associated with Project construction would be heightened due to proximity, and the mostly flat, scattered shrub-covered valley terrain would be altered by the introduction of hard lines, removal of vegetation, visual effect of changing soil colors associated with grading and compaction, installation of perimeter chain-link fencing where no fencing currently occurs, installation of numerous rows of solar panels up to 14-feet in height (and installation of 104 foot tall transmission line poles) . Viewer groups affected by these impacts and visible contrasts include a single residence located just north of the Project boundary and a limited number of daily motorists using Buck Boulevard and 5th Avenue.

At KOP 4 (6th Avenue), construction activities on the Project site would be located 1 mile or more away and would be lower in the desert landscape compared to the elevation of the limited number of viewers at 6th Avenue. Views to site preparation and vegetation removal (and the vehicles and equipment carrying out these activities on the Project site) would be available, but partially obscured by intervening terrain (specifically, a low ridge in the foreground-middleground that sits above a lower desert drainage and lands across the Project site) and by distance. Similar, views to Phase 1 transmission line pole installation and installation of components at the Phase 1 switchyard would be available but somewhat difficult to clearly discern due to distance (and the generally thin form of proposed features). In addition, activities would be viewed against the dark form of distant mountains (see Figure 2).

As discussed below in Table 3, contrasts resulting from Project construction would range from none/weak to strong depending on viewing location. Visual contrasts during the construction phase were estimated based on proximity of KOPs and clarity of views to the Project site, as well as visual change from construction occurring within the same areas where permanent Project facilities are shown in the visual simulations prepared for Project operations. Generally, contrasts during construction are expected to be greater than during the operation phase since viewers would witness change across the site as construction progresses, as well as the juxtaposition of permanent facilities and active construction activities.

Table 3. Summary of Contrast Rating Results and Conformance with VRM Class IV Objectives

KOP	Location Name	Construction	Operations and Maintenance	Decommissioning[a]
KOP 1	Interstate 10 (Eastbound)	Weak	Weak	Weak
KOP 2	Dracker Drive	Weak-Moderate	Weak-Moderate	Weak-Moderate
KOP 3	5th Avenue	Strong	Strong	Strong
KOP 4	6th Avenue	Weak	Weak	Weak
KOP 5	Buck Boulevard	Strong	Moderate	Strong

Note: While KOP 1 and KOP 2 are the only KOPs focused on Project components located on public lands managed by BLM, a summary of contrast is provided for consistency.

[a] Visual contrast during decommissioning is anticipated to be similar to visual contrasts during construction.

5.1.2 Operations

Components of the Project (primarily solar panels, but also the BESS, substation, Phase 1 and 2 transmission lines, and Phase 1 switchyard) would have varying degrees of visibility from the five KOPs identified for analysis based on elevation of the vantage point, proximity to the Project site, and the presence (or lack thereof) of intervening screening elements such as vegetation, terrain, and/or structures. While the Phase 1 transmission line would be visible from KOP 2, 3, 4, and 5, it would not be visible from KOP 1. On the other hand, the Phase 2 transmission line would be clearly visible in views from KOPs 1 and 2 (see Figures 10 and 11) but would not be evident in views from KOPs 3 through 5 (Figures 12 through 14). From KOP 1, the co-location of the Project's transmission line (Phase 2) on existing tubular steel poles supporting the Arlington Solar Energy Project transmission line would mimic the form, line, and color of existing transmission lines in the landscape and would create a weak visual contrast. At KOP 2, the co-located transmission line would be strung on existing tubular steel poles paralleling Dracker Drive (Phase 2) and would create a weak visual contrast; however, the introduction of new steel poles within 0.25 miles of motorists would create new straight, vertical lines in the landscape located east of Dracker Drive. While these Phase 2 transmission line poles would be located east of Dracker Drive (i.e., where no existing poles are currently located), their apparent scale would be reduced by distance and their prominence would be lessened by the presence of existing electrical transmission infrastructure in the view. As further detailed in Table 4 below, Project operations would result in strong to weak visual contrasts at remaining KOPs.

Table 4. Summary of Contrast Rating Results for Operation and Maintenance, and Conformance with VRM Class Objectives

KOP	Location	Degree of Visual Contrast	Conforms with VRM Class IV?	Analysis
1	I- 10 (Eastbound)	Weak	Yes	At KOP 1, the Project's transmission line (Phase 2) would be strung on the existing poles supporting the Arlington Solar Energy transmission line. New transmission line would present similar characteristics (i.e., horizontal line, dark color, and thin form) to existing transmission lines in the

Table 4. Summary of Contrast Rating Results for Operation and Maintenance, and Conformance with VRM Class Objectives

KOP	Location	Degree of Visual Contrast	Conforms with VRM Class IV?	Analysis
				view, and while the Project would add new lines to the landscape, overall contrasts would be weak.
2	Dracker Drive	Weak	Yes	From KOP 2, the transmission line alignment running west from the Project substation to Dracker Drive (i.e., Phase 2 transmission line) would be located approximately 0.45 miles to the northeast. Following the span of Dracker Drive, the transmission line (Phase 2) would be strung on two new poles to be located west of Dracker Drive and then onto existing tubular steel poles paralleling the road. New poles supporting the Project transmission line to the east of Dracker Drive would be tall but thin. When combined with stacked/parallel segments of conductor line, these new poles would create visible form and line contrasts that would be somewhat moderated by distance and partial screening by large creosote shrubs in the immediate foreground-middleground. New poles and transmission lines to be located west of Dracker Drive would occur in an area of the landscape supporting multiple tubular steel poles and conductor line. As such, new poles and transmission lines added to the west and east of Dracker Drive would create a weak contrast.
3	5th Avenue	Strong	Not Applicable	At KOP 3, perimeter fencing and solar panels installed across graded and leveled sites would be present in the immediate foreground-middleground of the view. Specifically, perimeter fencing would be located within 200 feet of viewers and solar panels would be within 230 feet. Due to proximity and height of panels compared to the elevation of 5th Avenue at KOP 3, solar panels would be visible, and would block notable features in the landscape. Poles associated with the Phase 1 transmission line would be visible to the southwest above solar panels. Rugged mountains would remain visible to the southwest (solar panels and new Phase 1 transmission line poles would not block mountains from view). With implementation of the Project, the open, desert valley terrain would be substantially altered.
4	6th Avenue	Weak	Not Applicable	At KOP 4, the upper edge of solar panels located nearly 0.75 miles away would be visible but mostly blocked by an intervening low desert ridge. Solar panel edges would appear as a low and broken, dark horizontal line that may be overlooked by casual observers. Other panels in the landscape

Table 4. Summary of Contrast Rating Results for Operation and Maintenance, and Conformance with VRM Class Objectives

KOP	Location	Degree of Visual Contrast	Conforms with VRM Class IV?	Analysis
				would be located over 1 mile away and, while visible, their low, rectangular form and line would create subtle/weak contrast in the landscape that would tend to blend with the dark form and line of agricultural crops and would create a weak contrast. Similarly, the thin, vertical lines of Phase 1 transmission line poles and switchyard components would be detectable but due to distance and the presence of distant mountains in the background, these features would create weak visual contrast.
5	Buck Boulevard	Strong	Not Applicable	From KOP 5, fencing along the site perimeter and solar panels across a graded and disturbed site would be present in the immediate foreground-middleground to the east and west of Buck Boulevard. Due to proximity of Buck Boulevard to the Project site, the gridded surface of solar panels would be detectable, as would numerous short metal piers supporting individual rows of panels. At KOP 5, solar panels would nearly cover the visible desert valley terrain in the foreground-middleground. While rugged mountains remain dominant in the background, the visual change associated with the presence of panels would create strong contrast.

5.1.3 Decommissioning

Effects to views and scenic resources during future decommissioning activities are anticipated to be similar to the temporary, short-term effects expected during the construction phase. Decommissioning would involve removal of the solar arrays and other facilities. Following decommissioning, the solar site would be reclaimed and restored according to applicable regulations at the time. A final decommissioning plan would be prepared in coordination with BLM and the County and implemented at end of the life of the Project. While site restoration would be intended to reduce vegetative contrasts across the site when viewed within the context of surrounding desert areas, revegetation in dry, desert locations is typically a slow process; therefore, during this period, the Project site would appear disturbed and create perceptible line, color, and texture contrasts with surrounding vegetated areas. The severity of contrasts associated with the reclaimed site would diminish over time as restoration achieves success, visual quality improves, and the site begins to resemble a natural (as opposed to disturbed) condition.

5.1.4 Night Sky Qualities

Nighttime lighting would be limited to areas required for operation, safety, or security. Low-elevation (less than 14 feet high) controlled security lighting would be installed at primary access gates, the substation, and the entrance to the battery energy storage structure(s). The lighting would only be switched on when personnel enter the area (either motion sensor or manual activation [i.e., switch]). All safety and emergency service signs would be lit when the lights are on. The lighting would be shielded, consistent with County Ordinance 655, so that the light is directed downwards to minimize glare. Lighting would only be in areas where it is required for safety, security, or operations. All lighting would be directed on site and would include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.

5.2 Analysis of CEQA Thresholds

Aesthetics, as addressed in CEQA, refers to visual considerations in the physical environment. Specifically, such considerations include the elements of the landscape that contribute to the aesthetic and/or scenic character and quality of the environment. These elements can be either natural or human-made. Landforms, water, and vegetation patterns are among the natural landscape features that define an area's visual character and quality, whereas buildings, roads, and other structures reflect human modifications to the landscape. These natural and built landscape features are considered visual or aesthetic resources that contribute to the public's experience and appreciation of the environment.

For the purposes of this report, scenic vistas are considered formally designated public vantage points offering views of primarily natural settings containing recognized scenic features or landscapes of special importance. The concepts of view blockage, interruption, and degradation are used to determine the severity of potential impacts to scenic vistas. If views from public vantage points across a project site include recognized scenic features, then Project components are examined to determine the likelihood for view obstruction (i.e., view blockage), view interruption (i.e., intrusion on available view due to contrasting features), or degradation (i.e., decline in scenic quality).

Scenic highways include those state facilities that have been officially designated or nominated for official designation through eligible status by the California Department of Transportation. As the project site is not within the viewshed of an eligible or designated state scenic highway, project construction and operations would have no impact on scenic resources within a state scenic highway. As such, impacts to scenic resources within a state scenic highway are not further discussed in this report.

Impacts to existing visual character and quality are determined through a comparison of pre- and post-development conditions on the Project site or along the alignment of linear Project components (e.g., transmission lines). Specifically, the Project is examined for potential contrast with existing on-site features and features in the surrounding area.

The potential for lighting and glare impacts are evaluated based on a comparative review of pre- and post-development lighting and glare sources operating in the Project area. "Glare" is generally understood to be an uncomfortable, bright light capable of disrupting vision and caused by light sources and/or reflective surfaces. If a project in an urban or developed area currently contains existing nighttime lighting and glare sources, then the likelihood for a project with comparable lighting to result in significant lighting and glare impacts is low (assuming the installation of standard control measures). On the other hand, if a dissimilar project in a low-lighting rural

environment with excessive or unusually bright lighting is implemented, then the likelihood for potentially significant lighting and glare impacts would be high. Glare determinations also rely on several approximations including observer characteristics, angle of view, and duration of exposure. A Project-specific glare analysis has been prepared, and the results of the analysis are summarized in Section 5.2.4. In addition, the Project-specific analysis is included as Appendix C to this report.

5.2.1 Scenic Vistas

While there are no scenic vistas designated in the County's Palo Verde Area Plan or General Plan, the rugged mountains and nearby Colorado River are valued for providing a scenic backdrop for the region (County of Riverside 2015). The Project site is west of the City of Blythe, surrounded by a landscape characterized by desert and mountainous terrain that provides opportunities for scenic vistas, offering unobstructed and panoramic views of the valley and mountain area. Despite the potential for scenic vistas in the surrounding area, formal trails and staging areas for recreationists to access the mountain terrain are generally non-existent.

Construction

Construction work schedules are expected to be 10 hours per day, 7 days a week, with shifts starting as early as 6:00 a.m. Work may occur during early mornings, evenings, or nights, and schedules may be adjusted for weather conditions, such as night work during summer. During night work, restricted nighttime lighting would be used to ensure safety while minimizing light exposure outside the construction area.

Pre-construction activities for the solar facility, transmission line (Phase 1 and Phase 2), SCADA, Phase 1 switchyard, BESS and substation site, and associated infrastructure would include vegetation clearing and ground disturbance. Installation of the transmission line structures would involve excavating tower holes and pouring concrete foundations. The Phase 1 transmission line would require the installation of approximately 52 new poles along the proposed alignment (see Figure 2). For the Phase 2 transmission line, a total of 40 new or replaced poles would be installed. Transmission line poles would be installed with either drilled pier or direct embed foundations. Water would be used for soil compaction and dust abatement, and after the structures are erected.

Construction of the Project would require the use of cranes and heavy equipment including tractors, dozers, graders, and scrapers. Construction would require temporary storage and operations facilities and temporary laydown and staging areas. The equipment, vehicles, and workforce involved with construction activities (and components associated with the various phases of construction) would have limited visibility from I-10. Most views to activities occurring within the boundary of the solar facility would generally be restricted to local roads around the site perimeter. Throughout the duration of construction, occurrences of blockage or interruption of scenic features in views would be temporary, as taller pieces of equipment move around the site and specific phases of construction are completed. Ground surface disturbance and vegetation removal and general grading and trenching activities could generate short-term dust clouds that have potential to temporarily affect general view quality, including degradation of existing view quality. Potential for short-term dust clouds would be substantially limited by compliance with Mojave Desert Air Quality Management District Rule 403, which requires watering active areas of construction two times daily (or the use of non-toxic soil stabilizers/soil weighting agents), restrictions on construction vehicle speeds on unpaved areas within the construction site, and use of gravel at unpaved exits from the Project site to prevent track-out onto public roadways. As detailed in the Project's Air Quality, GHG, and Energy Technical Report, the Applicant would be required to prepare a comprehensive Fugitive Dust Control Plan consistent with Mojave Desert Air Quality Management District Rule 403. With

implementation of the Fugitive Dust Control Plan during construction, temporary visual effects related to reduced visual quality would be reduced.

Operations

The Project's operations and maintenance (O&M) activities include road and vegetation management, scheduled maintenance of electrical equipment, and occasional replacement of faulty modules. Access roads would be regularly inspected and repaired, with dust palliative applied as needed. Solar panels would be washed annually Site security would include monitoring by on-site or remote personnel, a chain-link fence with barbed wire, and emergency access provisions.

The Project's Fire Prevention and Safety Plan would be updated before construction and operation, complying with BLM and County regulations. Water use during operations would be minimal, primarily for dust control.

While views from elevated terrain in the area surrounding the Project site (e.g., Palen-McCoy Mountains to the west and the Big Maria Mountains to the northeast) may provide opportunities for broad, panoramic, and long views of the surrounding area, regular recreational use of the area surrounding the Project site is not in evidence. Due to the remote nature of the area, lack of formal or informal public staging and parking areas, and lack of formal or signed trails, the Project would have limited and less than significant impacts on views from elevated mountain terrain in the surrounding area that could support dispersed, trail-based recreation.

Views of the local broad desert valley and rugged mountain terrain are available from local roads surrounding and providing access to the Project site including Dracker Drive, 5th Avenue, and Buck Boulevard. Existing conditions views from these locations and changes resulting from Project implementation are included on Figures 11, 12, and 14. While the installation of fencing, solar panels, and other components and changes associated with Project operations would alter the landscape as viewed from these vantage points, the rugged mountains would continue to provide a scenic backdrop (Project components would not result in long-term blockage of mountain terrain from view). Further, Project components including solar panels would temporarily be within the viewshed of local roads, and view exposure for motorists would generally be brief. Lastly, the low volume of motorists on local roads including Dracker Drive and Buck Boulevard would further reduce the potential for visible Project components to create a significant scenic vista impact as viewed from local area roads.

Decommissioning

The Project is expected to operate for up to 40 years. After this period, the Applicant may either update the site technology and seek an extension of the Conditional Use Permit and Public Use Permit to recommission the Project or proceed with decommissioning the site and removing the systems and their components. Decommissioning activities would result in similar temporary impacts as construction activities.

5.2.2 Visual Character and Quality

Construction

Construction activities would cause temporary visual impacts associated with the presence of vehicles, materials, equipment, and personnel at the solar facility site and along the transmission line routes. In addition, temporary visual change associated with removal of vegetation from the Project site (and related generation of dust), and increased vehicle traffic on I-10 and more local project area roads would occur. The visual effects associated with

the temporary presence of equipment, materials, and personnel would occur throughout the Project site (solar facilities and transmission lines). Construction would involve the use of cranes and heavy equipment, temporary storage facilities, and temporary laydown/staging areas. Construction activities would include site clearing and grading, assembly and installation of solar arrays, installation of BESS, switchyard, and substation components, installation of transmission line structures, conductor stringing and pulling, and site cleanup and restoration. These activities would be visible from I-10, Dracker Drive, 5th Avenue, 6th Avenue, Buck Boulevard, the few rural residences in the area, and the surrounding mountainous areas. Throughout the construction period, construction activities would cause visual contrast and visual change with nearby areas of undeveloped and/or vacant desert terrain but would be generally compatible with the character of existing nearby solar facilities. Because construction activities would be temporary in nature, they would not result in a substantial long-term visual effect and overall impacts would be less than significant.

Operations

During Project operations, components of the Project (primarily solar panels but also the BESS, project substation and switchyard, O&M building, transmission line and collection system poles) would have varying degrees of visibility from public vantage points in the surrounding area. In addition, solar panels and the transmission lines (Phase 1 and 2) would have varying visibility from the five KOPs identified for analysis based on elevation of the vantage point, proximity to the Project site, and the presence (or lack thereof) of intervening screening elements such as vegetation, terrain, and/or structures. A brief KOP discussion is presented below to inform the potential for the Project to substantially degrade existing visual character and quality of the landscape.

KOP 1: Interstate 10 (Eastbound)

Figure 10, Key Observation Point 1: Existing and Proposed Conditions, is a depiction of the existing and future views of the site for motorists traveling eastbound on I-10. As shown in Figure 10, the interstate extends throughout much of the foreground/middleground, two eastbound lanes are pictured in the immediate foreground/middleground, and a graded median separates east and westbound travel lanes. Existing transmission infrastructure is present, and more specifically, four tall and dark poles with horizontal conductor lines stretch across the view. In the background, low, rugged, and distant mountains extend vertically above the background horizon. While the mountains are distant, they are visually prominent when viewed against the flat valley terrain. As proposed and as viewed near KOP 1, the Project's Phase 2 transmission line would be strung on existing poles supporting the Arlington Solar Energy Center transmission line. The addition of the Project transmission line to the existing transmission line corridor that crosses the interstate would result in weak contrast and overall change, as the form and line of new conductor lines would mimic the form and line of existing conductor lines (see Figure 10).

KOP 2: Dracker Drive

From northbound Dracker Drive (KOP 2), the Project's Phase 2 transmission line would run west from the Project substation towards Dracker Drive. The nearest poles along the alignment would be located approximately 0.45 miles to the northeast of KOP 2. Following the span of Dracker Drive, the transmission line line would be strung on two new poles to be located west of Dracker Drive and then onto existing tubular steel poles paralleling the road. New poles supporting the Project transmission line located to the east of Dracker Drive (and northeast of KOP 2) would be tall but thin and, combined with stacked/parallel segments of conductor line, would create visible form and line contrasts that would be somewhat moderated by distance and partial screening by large creosote shrubs in the immediate foreground-middleground. See Figure 11, Key Observation Point 2: Existing and Proposed Conditions. New poles and transmission lines located to the west of Dracker Drive would occur in an area of the

landscape that features multiple tubular steel poles and conductor lines, and as such, new poles and lines added to the west of Dracker Drive would create a weak contrast (see Figure 11, Key Observation Point 2: Existing and Proposed Conditions).

KOP 3: 5th Avenue

Southerly views from KOP 3 include undeveloped valley terrain with visible undulations, scattered low grasses, and low to medium shrubs. A clustered grove of vertical features (trees) is visible to the south, as is a line of thin and vertical wood poles supporting a local electrical distribution line. Lastly, the dark silhouette of rugged mountains in the background rises from the flat valley and is visually prominent. Following the completion of Project construction, perimeter fencing and solar panels installed across graded and leveled sites would be present in the immediate foreground-middleground of the view. Specifically, perimeter fencing would be located within 200 feet of viewers and solar panels would be within 230 feet. Due to proximity and height of panels comparative to the elevation of 5th Avenue at KOP 3, solar panels would block most features in the landscape except for views of the mountains that would remain visible to the southwest. Also, the aforementioned grove of trees to the south would be removed to accommodate solar array installation and thin, vertical poles supporting the Phase 1 transmission line would be partially visible over foreground solar panels. With implementation of the Project, the open and undeveloped character of the existing desert valley terrain would be substantially altered (see Figure 12, Key Observation Point 3: Existing and Proposed Conditions).

KOP 4: 6th Avenue

KOP 4 is located along 6th Avenue, adjacent to Palo Verde College. Views of the open, undeveloped landscape extend west across the broad valley terrain towards dark and rugged mountains in the background. Following Project construction, the upper edge of solar panels located nearly 0.75 miles away would be visible but mostly blocked by an intervening and low desert ridge. Panel edges would appear as a low and broken dark horizontal line that may be overlooked by casual observers. Other panels in the landscape would be located over 1 mile away and, while visible, their low rectangular form and line would create a subtle/weak contrast in the landscape that would tend to blend in with the dark form and line of agricultural crops. Similarly, distant monopoles support the Phase 1 transmission line would be visible but somewhat faint and are anticipated to create weak line and color contrast (see Figure 13, Key Observation Point 4: Existing and Proposed Conditions).

KOP 5: Buck Boulevard

KOP 5 is located on Buck Boulevard, a local north–south road that divides the eastern portion of the Project site from the central and western portions. At this vantage point that is experienced by a limited number of motorists, fencing along the site perimeter and solar panels across a graded and disturbed site would be present in the immediate foreground-middleground to the east and west of Buck Boulevard. Due to the proximity of Buck Boulevard to the Project site, individual grids on the surface of solar panels would be detectable, as would numerous short metal piers supporting individual rows of panels. At KOP 5, solar panels would nearly cover the visible desert valley terrain in the foreground-middle ground and substantially alter the existing visual character and quality. Solar panels would result in a strong visual contrast on account of their prominent horizontal form, horizontal to vertical line, and dark color (see Figure 14, Key Observation Point 5: Existing and Proposed Conditions).

Summary

While the Project would be visible from higher volume public vantage points (i.e., KOP 1), the design and basic characteristics of the visible components (mostly, the proposed transmission lines) would be consistent with the visual elements of form, line, color, and texture that are present in the existing landscape. As the transmission line (Phase 2) would be co-located on existing poles supporting the Arlington Solar Energy Center transmission line, resulting visual contrast and impacts would be weak and generally less than significant. The proposed Phase 2 transmission line (both co-located and segments requiring new, Project specific support poles) would also be visible from a nearby lower volume, two-lane roadway (i.e., KOP 2). From this vantage point, the co-located and new transmission line segments would produce mostly a weak contrast. While new poles would be installed to support the Phase 1 transmission line, the poles and conductor lines would have generally limited visible and features of similar scale (i.e., the existing WAPA Parker Blythe 161 kV transmission line) occur in the general vicinity of the Phase 1 alignment. As viewers are placed closer to the Project site and are provided foreground views to solar panels and fencing from perimeter roads (including KOP 3) and a road bisecting the Project site (i.e., KOP 5), the broad flat form and dark color of the solar panels, along with the developed and orderly look of the solar facility, would strongly contrast with the desert landscape surrounding the Project and would tend to dominate (or at KOP 5, co-dominate) views. Though the existing visual character of the Project area is already influenced by existing transmission lines and other energy projects (see Figure 4), Project operations, and specifically, proposed grading and installation of the solar facility in the valley landscape, would result in substantial degradation of the existing visual character and visual quality of the Project site when viewed from nearby foreground viewing locations. APM-VR-1 (Lighting Control) and APM-VR-2 (Surface Treatment of Project Structures/Buildings) (presented in Section 1.3.4, Applicant Proposed Measures), and MM-VIS-1 would be implemented to reduce visual contrast of the Project as experienced from KOPs 3 and 5 during operation, and decommissioning; however, these measures would not fully mitigate the significant visual impact of the Project. As such, impacts to existing visual character and quality would remain significant and unavoidable.

MM-VIS-1: **Project Design**. To the extent possible, the Applicant or Project owner /operator shall implement proper design fundamentals to reduce the visual contrast to the landscape. These primarily focus on the reduction of unnecessary disturbance. Design strategies to address these fundamentals may include the following:

- The boundaries of all areas to be disturbed shall be delineated with stakes and flagging before construction, in consultation with the Designated Biologist and County Visual specialist.
- Spoils and topsoil where feasible shall be stockpiled in disturbed areas approved by the Designated Biologist.
- Project vehicles and equipment shall be confined to the flagged areas.
- Where retention of vegetation is not possible, vegetation along roadways and boundaries of other disturbed areas shall be scalloped (refers to incorporating irregular (non-straight) edges of vegetation to make edges/transitions between managed and non-managed areas appear more natural) and feathered (refers to thinning edges of vegetation to make transitions from vegetated to non-vegetated area softer and less abrupt) to reduce the hard line visual impact.
- New and existing roads that are planned for construction, widening, or other improvements:
  - shall not extend beyond the minimum necessary and shall be flagged as described above.

  - All vehicles passing or turning around shall do so within the planned impact area or in previously disturbed areas.
  - Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged or staked) before the onset of construction.
- Reduce the amount of disturbed area and blend the disturbed areas into the characteristic landscape.
  - Where feasible, replace soil, brush, rocks, and natural debris over disturbed area.

Significance after Implementation

Implementation of APM-VR-1 and APM-VR-2 would further reduce less-than-significant impacts to visual resources at 5th Avenue and Buck Boulevard (i.e. KOP 3 and KOP 5). In addition to APM-VR-1 and APM-VR-2, the Project would implement MM- VIS-1, which would reduce the severity of the Project's impacts to visual resources at 5th Avenue and Buck Boulevard (i.e. KOP 3 and KOP 5). However, the Project would continue to have a significant and unavoidable impact to visual resources after implementation of mitigation.

5.2.3 Lighting and Glare

Lighting and Glare - Construction and Decommissioning

The Project would use restricted nighttime lighting during construction. Lighting would include only what is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the construction area consistent with County Ordinance 655.

Because construction (and decommissioning) activities would generally end in the early evening and due to the anticipated infrequent need for early morning or late-night construction to accommodate certain phases, use of nighttime lighting during construction and decommissioning activities is anticipated to be limited. Further, because limited lighting that is focused downward and shielded would be used when needed and given the temporary nature of construction (and decommissioning) activities, lighting use during construction and decommissioning activities would result in less-than-significant impacts.

Lighting – Operations

Nighttime lighting would be limited to areas required for operation, safety, or security. Low-elevation (less than 14 feet high) controlled security lighting would be installed at primary access gates, the on-site substation, and the entrance to the battery energy storage structure(s). The lighting would only be switched on when personnel enter the area (either motion sensor or manual activation [i.e., switch]). All safety and emergency service signs would be lit when the lights are on. The lighting would be shielded so that the light is directed downwards to minimize glare. Lighting would only be in areas where it is required for safety, security, or operations. All lighting would be directed on site and would include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.

The Project would use portable lighting for any emergency work that must occur on panels at night. The level and intensity of lighting during operations would be the minimum needed. Portable lighting may be used occasionally and temporarily for maintenance activities during operations.

During operations, a limited number of lighting fixtures would be installed and operate. Specifically, lighting controlled via switch would be installed at key locations (i.e., at access gates, at the substation and O&M building, and entrance to the BESS). The substation, O&M building, and BESS are not located near permanent viewers (the nearest residents are located nearly 2.3 miles away). Because permanent controlled lighting installed at the on-site substation, O&M building, and BESS would only be turned on when Project personnel is present and the lighting fixtures installed at these facilities would not be visible from the nearest residence in the area (and because lighting sources would be shielded), substation, O&M building, and BESS lighting would not result in a substantial source of light or glare that would adversely affect nighttime views in the area. Shielded lighting at primary access gates would also be controlled via switch and would not be turned on unless Project personnel is present. For these reasons and due to the limited number of viewers anticipated to be exposed to access gate lighting, this source would not result in a substantial source of light or glare that would adversely affect nighttime views in the area. As such, impacts would be less than significant.

Glare – Operations

While solar panels would be uniformly dark in color, they would also be non-reflective and designed to be highly absorptive of all light that strikes their glass surfaces. Other Project components, including the substation, switchyard, O&M building, inverters, BESS enclosures, and the transmission lines would be constructed of steel and/or other metallic materials. According to the Glare Analysis Report prepared for the Project (see Appendix C to this Visual Resources Report), Project-generated glare could be perceptible during brief portions of the day during certain times of year at a single nearby residence (i.e., the residence near KOP 3 along 5th Avenue). Specifically, less problematic "green" glare was predicted to be received at the residence in the early morning and late afternoon from late September to early March for an average of less than 5 minutes per day with the longest daily duration during this time period being 10 minutes. From late October to early February, yellow glare (glare with potential for after image) was predicted to be received at the residence in the early morning and late afternoon from late October to early January for an average of approximately 2 minutes per day with the longest daily duration during this time period being 4 minutes. See Appendix C for additional detail. The Glare Analysis Report did not assess the potential for glare to be received on local roads near the Project site.

Due to the calculated limited exposure of viewers to Project-generated glare (including the local rural residence located north of the Project site and near the intersection of 5th Avenue/7th Avenue) and because the glare resulting from the proposed single-axis solar tracking array occurs during early-morning and late-afternoon backtracking when sun altitude angles are no greater than one degree above the horizon (mimicking natural glare from the sun at sunrise and sunset), Project-generated glare from proposed solar panels would result in less-than-significant impacts that would not adversely affect daytime views in the area. In addition, and due to the assumed low public use of roadways along the perimeter of the proposed solar facility (and related low exposure of mobile viewers to project-generated glare while travelling parallel to the solar facility), Project-generated glare from proposed solar panels would result in less-than-significant impacts to local road users. While impacts were determined to be less than significant, consistent with the recommendations from the Glare Analysis Report (see Appendix C), it is recommended that the Applicant/Project operator modify the panel backtracking strategy to avoid shallow backtracking angles in the early morning or late afternoon during Project operations. The final backtracking strategy shall be reviewed and approved by Riverside County Airport Land Use Commission. The Glare Analysis Report should be supplemented with analysis of final backtracking strategy to ensure that a reduction in predicted glare to be received by the identified residence would be achieved. The final backtracking strategy shall be noted on Project plans and/or in a post-construction compliance report to be provided to the local Airport Land Use Commission.

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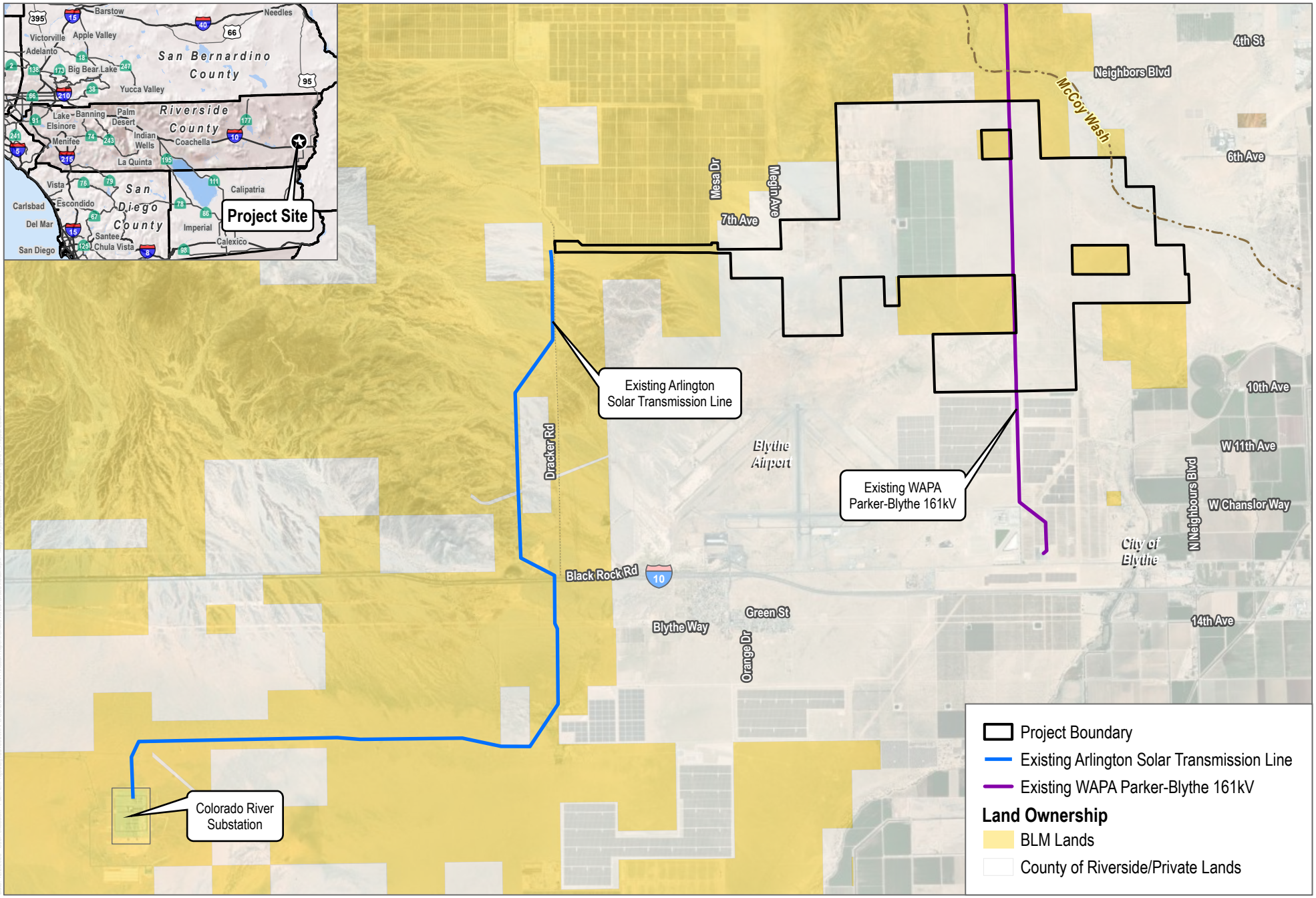
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SOURCE: Maxar 2023

DUDEK

0 0.5 1 Miles

FIGURE 1

Project Location

Grace Solar Energy Center

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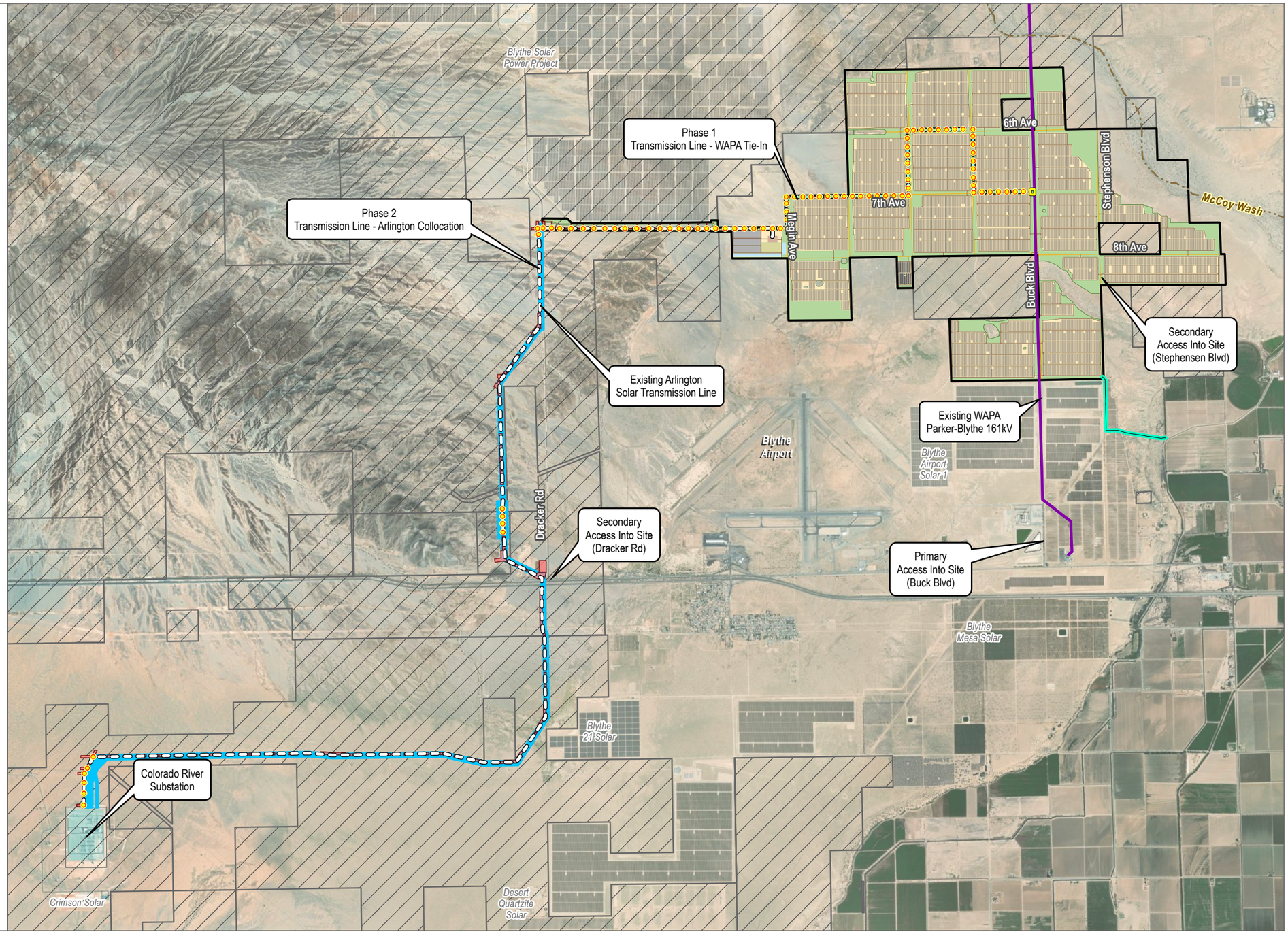
Project Boundary
BLM Lands

Existing Infrastructure

Existing Water Pipeline
Existing WAPA Parker-Blythe 161kV
Existing Arlington Gen-Tie Corridor

Site Plan

Access Road
Basin
BESS
Fenced Area
Laydown
Public Road Improvement
Solar Array
Substation
Limits of Disturbance
Transmission Line Work Area
Phase 1 Transmission Line - WAPA Tie-In
Phase 2 Transmission Line - Arlington Collocation
Proposed Transmission Line Pole
Switchyard
O&M Building



SOURCE: Maxar 2023

DUDEK

N

0 2,050 4,100 Feet

FIGURE 2

Site Layout

Grace Solar Energy Center

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Project Site (onsite)
Transmission Line (offsite)
Existing Arlington Solar Transmission Line
Existing WAPA Parker-Blythe 161kV
BLM Lands

BLM Visual Resource Inventory (VRI) Inventory Classes, Preferred Alt.

Class II
Class III
Class IV

SOURCE: Esri World Imagery (accessed 2024); Riverside County 2015; BLM DRECP 2014

DUDEK

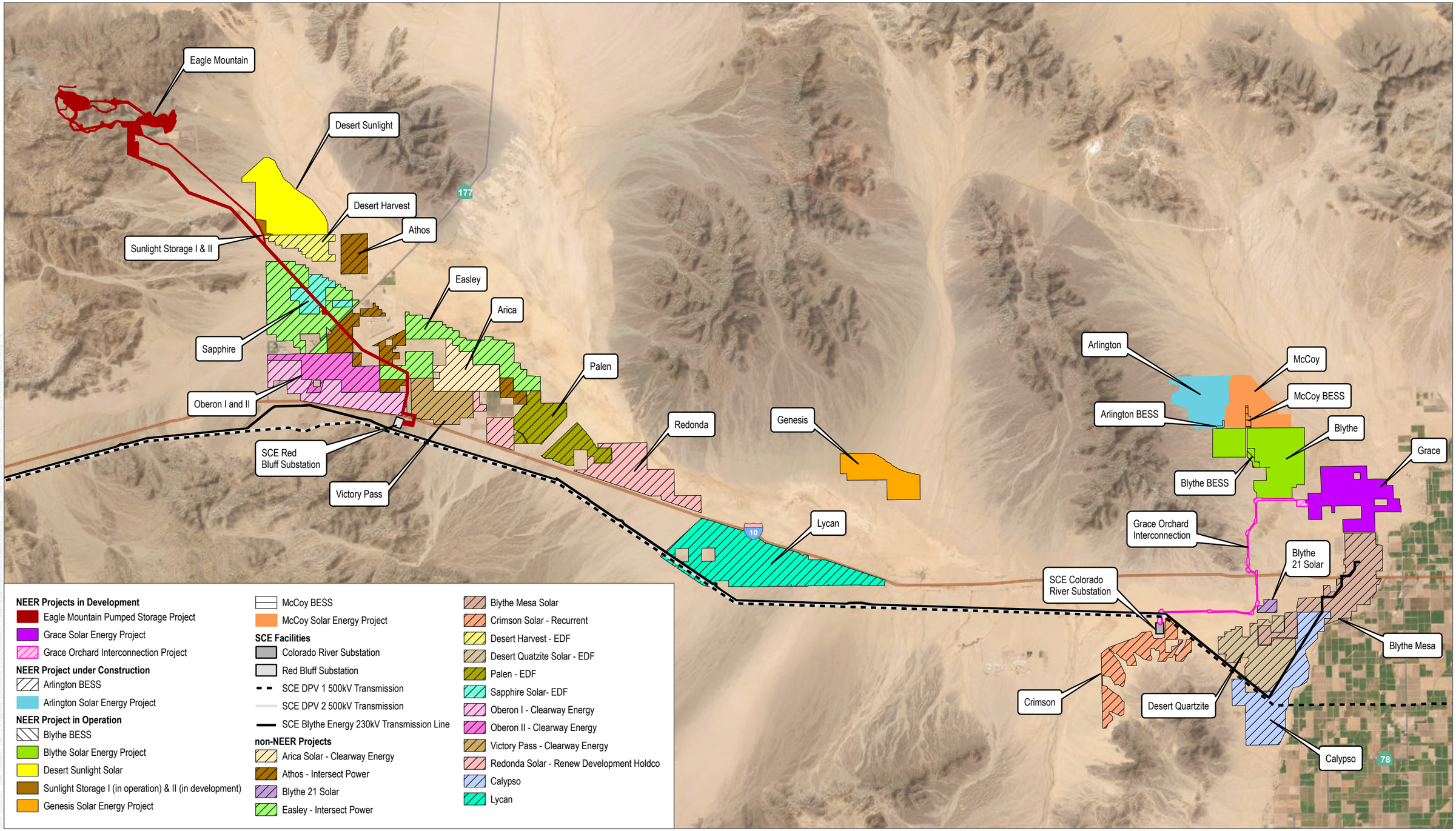
0 0.5 1 Miles

FIGURE 3

VRM Classes in the Project Area

Grace Solar Energy Center

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SOURCE: Maxar 2024

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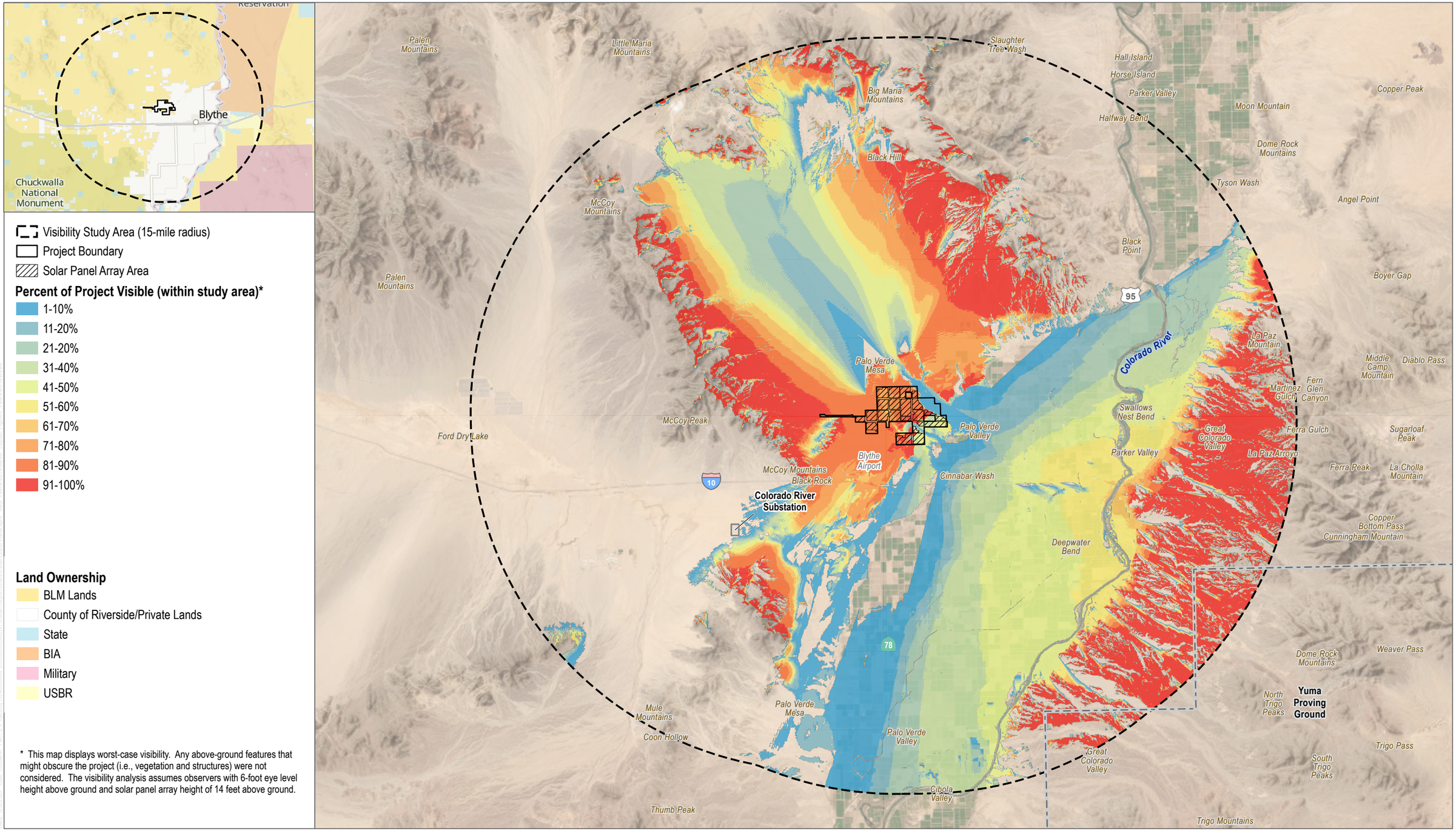
0 2 4 Miles

FIGURE 4

Solar Projects Along I-10

Grace Solar Energy Center

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SOURCE: USGS 3DEP 2024; Esri World Imagery (accessed 2024)

DUDEK

0 2 4 Miles

FIGURE 5

Viewshed Analysis

Grace Solar Energy Center

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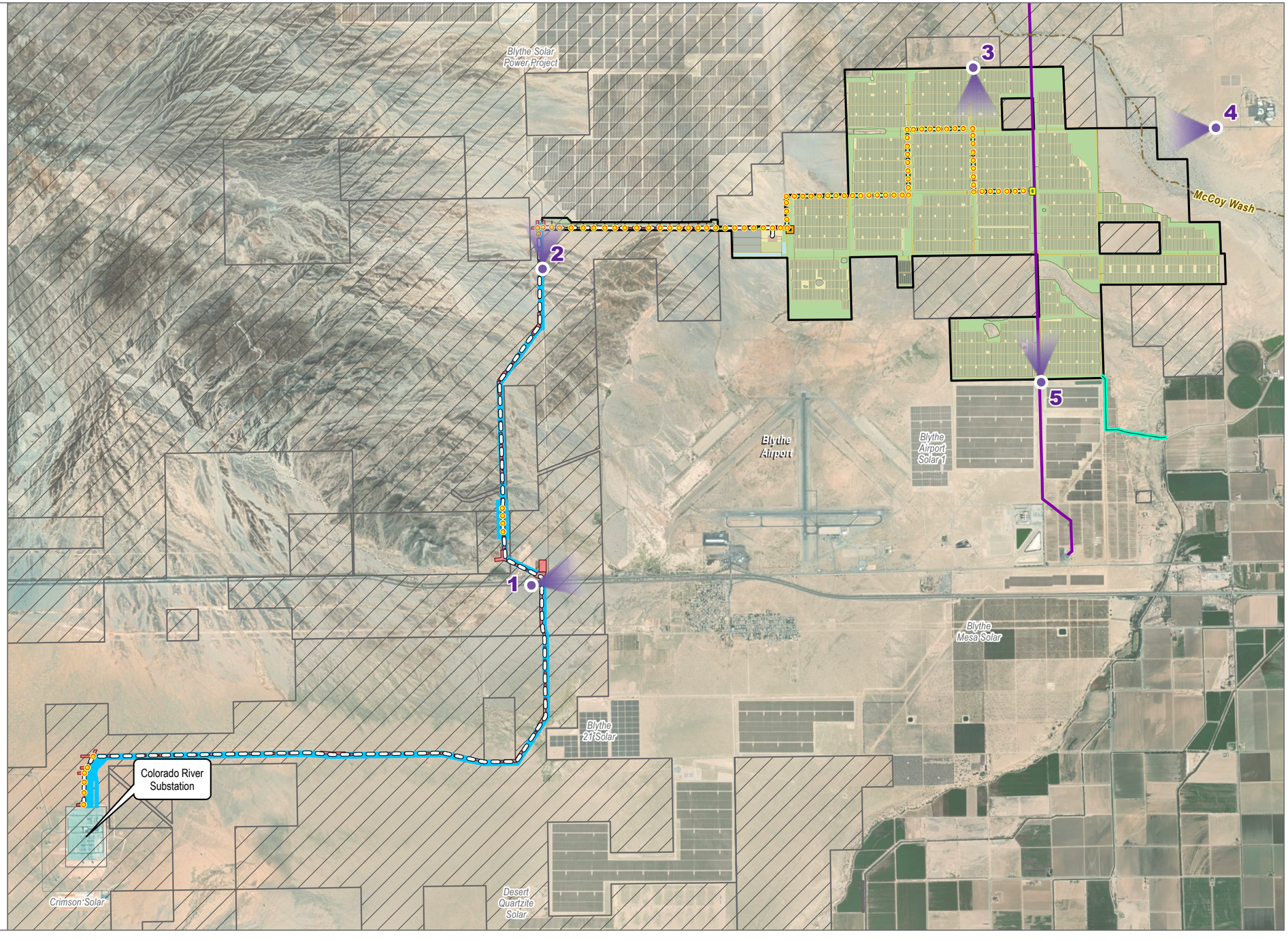
- Project Boundary
- BLM Lands

Existing Infrastructure

- Existing Water Pipeline
- Existing WAPA Parker-Blythe 161kV
- Existing Arlington Gen-Tie Corridor

Site Plan

- Access Road
- Basin
- BESS
- Fenced Area
- Laydown
- Public Road Improvement
- Solar Array
- Substation
- Limits of Disturbance
- Transmission Line Work Area
- Phase 1 Transmission Line - WAPA Tie-In
- Phase 2 Transmission Line - Arlington Collocation
- Proposed Transmission Line Pole
- Switchyard
- O&M Building



SOURCE: Maxar 2023

DUDEK

0 2,050 4,100 Feet

FIGURE 6

Key Observation Points

Grace Solar Energy Center

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KOP 1: Interstate 10 (Eastbound)



KOP 2: Dracker Boulevard

FIGURE 7

Key Observation Points 1 and 2: Existing View

Grace Solar Energy Center Project

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KOP 3: 5th Avenue



KOP 4: 6th Avenue

FIGURE 8

Key Observation Points 3 and 4: Existing View

Grace Solar Energy Center Project

DUDEK

INTENTIONALLY LEFT BLANK



KOP 5: Buck Boulevard

FIGURE 9

Key Observation Point 5: Existing View

Grace Solar Energy Center Project

DUDEK

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Existing Conditions



Proposed Conditions

FIGURE 10

Key Observation Point 1: Existing and Proposed Conditions

Grace Solar Energy Center

DUDEK

INTENTIONALLY LEFT BLANK



Existing Conditions



Proposed Conditions

FIGURE 11

Key Observation Point 2: Existing and Proposed Conditions

Grace Solar Energy Center

DUDEK

INTENTIONALLY LEFT BLANK



Existing Conditions



Proposed Conditions

FIGURE 12

Key Observation Point 3: Existing and Proposed Conditions

Grace Solar Energy Center

DUDEK

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Existing Conditions



Proposed Conditions

FIGURE 13

Key Observation Point 4: Existing and Proposed Conditions

Grace Solar Energy Center

DUDEK

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Existing Conditions



Proposed Conditions

FIGURE 14

Key Observation Point 5: Existing and Proposed Conditions

Grace Solar Energy Center

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Appendix A

Western Solar Plan Best Management Practices

A.2.2.12.6 Transmission Lines and Roads

Most design features applied to the construction, operation, and decommissioning activities discussed above shall also be implemented during the entire life of transmission lines. An additional design feature is to access the transmission lines from public roads and designated routes to the maximum extent possible in order to minimize fugitive dust emissions.

A.2.2.13 Design Features for Visual Resources

The nature, extent, and magnitude of visual impacts from utility-scale solar facilities will vary on a site-specific basis and depend on the specific phase of the project (e.g., construction or operation). Similarly, visual impact mitigation measures will vary on a site-specific basis and depend on the specific phase of the project.

The BLM and DOI, as well as other federal agencies such as the U.S. Forest Service (USFS), have established measures for mitigating the visual impacts of energy production, transmission, roads, and other forms of development on federal lands of the western United States. Several of their publications were primary sources for the design features listed in this section.

Solar energy development and related activities proposed on BLM-administered lands and connected actions shall abide by VRM policies and procedures defined in BLM's Manual M-8400, *Visual Resource Management,* and Handbooks H-8410-1, *Visual Resource Inventory*, and H-8431-1, *Visual Resource Contrast Rating*. Other policy requirements and clarifications are available in IM 98-164 and IM 2009-167.

A.2.2.13.1 Siting and Design

The greatest potential for visual impact mitigation associated with a utility-scale solar energy project and associated electricity transmission facilities occurs as a result of decisions made during the siting and design of the project. Visual impacts can be substantially reduced or avoided by careful project siting.

The BLM resource management plans (RMPs) designate VRM Classes I–IV, which establish objectives for managing allowable levels of visual change to the landscape. Solar development and related activities are required to meet the VRM class objectives. Project developers shall consult the VRM class designations and associated management objectives during the early phases of project planning, including those related to project due diligence, site selection, planning, and design. It is the developer's responsibility to conduct an early investigation of the respective project's compatibility with the VRM class objectives and the potential that these objectives can be met by applying thoughtful and creative design principles. Project developers shall document and demonstrate how the visual management objectives were factored into the various phases of project planning and decision rationale.

The BLM visual resource inventory (VRI) class values—including those for scenic quality, sensitivity, and distance zones—shall also be factored into the project planning, design, and decision making. Project developers shall demonstrate how the visual values influence project design and document how impacts on these values are minimized through consideration for the proposed project location and its relationship to the surrounding viewshed. This information shall be included as a part of the critical due diligence information considered when determining and selecting solar development sites and ROW boundaries. ROW location, size, and boundary determinations shall consider terrain characteristics and opportunities for full or partial project concealment by recessing the project into the landscape terrain.

Project developers shall consult with the BLM in the early phases of project planning to help determine the proposed project's potential conformance to the applicable RMP's VRM class designation and other potential constraints, thus avoiding costly unforeseen planning implications and re-design.

A qualified and licensed professional landscape architect with demonstrated experience with the BLM's VRM policies and procedures shall be a part of the developer's and the BLM's respective planning teams, evaluating visual resource issues as project siting options are considered. The visual issues shall be addressed throughout the planning and design process, and the final project plans shall reflect intended methods for mitigating visual impacts.

The appropriate BLM field office and locally based public shall be consulted to provide input on identifying important visual resources in the project area and on the siting and design process. The public shall be involved and informed about the visual site design elements of the proposed solar energy facilities. Possible approaches include conducting public forums for disseminating information, offering organized tours of operating solar energy development projects, and using computer and visualization simulations in public presentations.

Project developers shall also consult on viewshed protection objectives and practices with the respective land management agencies that have been assigned administrative responsibility for landscapes having special designations, such as Wilderness Areas, National Scenic and Historic Trails, Wild and Scenic Rivers, etc., National Parks, and National Wildlife Refuges located within the project's viewshed. Developers shall demonstrate a concerted effort to reconcile conflicts while recognizing that the BLM retains authority for final decisions determining project approval and conditions.

The following are specific to National Historic Trails but possibly pertain to other specially designated lands, such as Wild and Scenic Rivers, Wilderness Areas, National Parks, and National Wildlife Refuges:

- For applications that include artifacts and remnants of a National Historic Trail, are located within the viewshed of a National Historic Trail's designated centerline, or include or are within the viewshed of a trail eligible for listing on the *National Register of Historic Places* (NRHP) by virtue of its important historical or cultural values and integrity of setting, the applicant shall evaluate the potential visual impacts on the trail associated with the proposed

project; minimize, avoid, or mitigate adverse effects through the Section 106 consultation process; and identify appropriate mitigation measures for inclusion as stipulations in the POD. This requirement does not supersede or amend National Historic Trails requirements cited in other sections but is in addition to and supportive of them.

- Because the landscape setting observed from units of the National Park system, national historic sites, national trails, and Tribal cultural resources may be a part of the historic context contributing to the historic significance of the site or trail, project siting shall avoid locating facilities that would alter the visual setting in a way that would reduce the historic significance or function, even if compliant with VRM objectives. This requirement does not supersede or amend national historic sites, national trails, and Tribal cultural resources requirements cited in other sections but is in addition to and supportive of them.

Project developers shall obtain topographical data of engineering-design quality and use digital terrain mapping tools at a landscape-viewshed scale for project location selection, site planning and design, visual impact analysis, and visual impact mitigation planning and design. Visual mitigation planning and design shall be performed through field assessments, applied global positioning system (GPS) technology, photo documentation, use of computer-aided design and development software, three-dimensional GIS modeling software, and imaging software to depict visual simulations to reflect a full range of visual resource mitigation measures. The digital terrain mapping tools shall be at a resolution and contour interval suitable for site design and accurate placement of proposed developments into the digital viewshed. Visual simulations shall be prepared and evaluated in accordance with BLM Handbook H-8431-1 and other agency directives, to create spatially accurate depictions of the appearance of proposed facilities. Simulations shall depict proposed project facilities from key observation points (KOPs) and other visual resource sensitive locations.

The siting and design of solar facilities, structures, roads, and other project elements shall explore and document design considerations for repeating the natural form, line, color, and texture of the existing landscape in accordance and compliance with the VRM class objectives.

The full range of visual BMPs shall be considered, and plans shall incorporate all pertinent BMPs. Visual resource monitoring and compliance strategies shall be included as a part of the project mitigation plans to cover the construction, operation, and decommissioning phases.

Conformance with VRM objectives shall be determined through the use of the BLM contrast rating procedures defined in BLM Handbook H-8431-1. Visual contrast rating mitigation of visual impacts shall abide by the requirements outlined in the handbook and other BLM directives. Plans for facilities determined not to be in conformance with VRM objectives either shall not be approved or shall be redesigned in order to meet the VRM objectives, and updated visual simulations shall be prepared. Revised project plans and simulations shall be reevaluated by using the contrast rating procedures and repeated until the proposed action is found to be in conformance.

KOPs shall be selected by first determining the extent of the viewshed by using the viewshed modeling tools previously cited. The viewshed modeling should illustrate the areas from which the proposed facilities may be seen out to 25 mi (40 km)—line-of-sight measured from the top elevations of facilities out to 5.5 ft (1.7 m) above the ground terrain. From within the areas, KOPs would then be selected at places where people would be expected: at roads, trails, campgrounds, recreationally active river corridors, residential areas, etc. For the purpose of conducting a visual contrast rating evaluation, the number of KOPs would be reduced to those that serve as the best representations for demonstrating conformance to the respective VRM class objectives. The BLM must approve KOP selections, and the BLM reserves the right to require additional KOPs to further determine the extent of visual impact and conformance to VRM class objectives.

Visual design elements shall be integrated into the construction plans, details, shop drawings, and specifications; these shall include, but not be limited to, grubbing and clearing, vegetation thinning and clearing, grading, revegetation, drainage, and structural plans. Visual design elements within the plans shall be measureable and monitored while under construction, while operational, and when decommissioned. The plans shall include a monitoring and compliance plan that establishes the monitoring requirements and thresholds for acceptable performance. The contrast rating procedures shall also be integrated as a field measuring compliance tool during operations and after decommissioning.

The following specific project siting measures can help reduce visual impacts of solar energy development projects and associated but independent facilities. Project planning and designs shall demonstrate the relevance and application of all BLM visual BMPs to the specific project, including, but not limited to, the following:

Viewshed-Based Site Selection and Siting

- Project developers shall exhaust opportunities to minimize visual dominance of projects by siting projects outside the viewsheds of KOPs or by siting them as far away as possible, diminishing dominance by maximizing visible separation with distance.

- Facility siting shall incorporate measures to minimize the profile of all facility-related structures to reduce visibility and visual dominance within the viewshed—particularly for facilities proposed within the foreground/middleground distance zone (0–5 mi [0–8 km]) of sensitive viewing locations with extended viewing opportunities and/or moving viewpoints including, but not limited to, National Scenic Byways, All-American Roads, State Scenic Byways, BLM Backcountry Byways, Special Recreation Management Areas (SRMAs), trails, residential areas, etc.

- Siting shall take advantage of both topography and vegetation as screening or partially screening devices to interrupt and restrict the views of projects from KOPs and visually sensitive areas.

- Locating facilities near visually prominent landscape features (e.g., knobs and waterfalls) that naturally draw an observer's attention shall be avoided.

- Visual "skylining" shall be avoided by placing structures, transmission lines, and other facilities away from ridgelines, summits, or other locations where they would silhouette against the sky from important viewing locations. Siting shall take advantage of opportunities to use topography as a backdrop for views of facilities and structures to avoid skylining. Alternatives shall be evaluated, and the least visually intrusive option shall be selected when linear facilities (e.g. transmission lines) cross over ridgelines.

- Siting of linear features (e.g., ROWs and roads) shall follow natural land contours rather than straight lines, particularly up slopes. Fall-line cuts shall be avoided. Following natural contours echoes the lines found in the natural landscape and often reduces cut-and-fill requirements; straight lines can introduce conspicuous linear contrasts that appear unnatural.

- Linear developments (e.g., transmission lines, pipelines, roads) shall follow the edges of natural clearings or natural lines of transition between vegetation type, topography, etc. (where they would be less conspicuous) rather than pass through the center of clearings.

Reduction of Surface Disturbance, Grading and Edge Treatments

- In visually sensitive areas, air transport capability shall be used to mobilize equipment and materials for clearing, grading, and erecting transmission towers, thereby preserving the natural landscape conditions between tower locations and reducing the need for permanent and/or temporary access roads.

- Vegetation and ground disturbance shall be minimized and take advantage of existing clearings.

- Structures and roads shall be designed and located to minimize and balance cuts and fills. Retaining walls, binwalls, half bridges, and tunnels shall be used to reduce cut and fill.

- Road-cut slopes shall be rounded, and the cut-and-fill pitch shall be varied to reduce contrasts in form and line; the slope shall be varied to preserve specimen trees and nonhazardous rock outcroppings.

- Natural or previously excavated bedrock landforms shall be sculpted and shaped when excavation of these landforms is required. Percent backslope, benches, and vertical variations shall be integrated into a final landform that repeats the natural shapes, forms, textures, and lines of the surrounding landscape. The earthen landform shall be integrated and transitioned into the

excavated bedrock landform. Sculpted rock face angles, bench formations, and backslope need to adhere to the natural bedding planes of the natural bedrock geology. Half-case drill traces from pre-split blasting shall not remain evident in the final rock face. The color contrast from the excavated rock faces shall be removed by color treating with a rock stain. Native vegetation (where feasible) or a mix of native and non-native species (if necessary to ensure successful revegetation) shall be reestablished with the benches and cavities created within the created bedrock formation.

- Where screening topography and vegetation are absent or minimal, natural-looking earthwork landforms, vegetative, or architectural screening shall be used to minimize visual impacts. The shape and height of earthwork landforms must be adapted to the surrounding landscape, and must consider the distance and viewing angle from KOPs in order to ensure that the earthworks are visually unobtrusive.

- Openings in vegetation for facilities, structures, roads, etc., shall be feathered and shaped to repeat the size, shape, and characteristics of naturally occurring openings.

- Topsoil from the site shall be stripped, stockpiled, and stabilized before excavating earth for facility construction.

- All electrical collector lines and pipelines shall be buried in a manner that minimizes additional surface disturbance (e.g., along roads or other paths of surface disturbance).

Building and Structural Materials

Visual impacts associated with solar energy and electricity transmission projects shall be mitigated by choosing appropriate building and structural materials and surface treatments (i.e., paints or coatings designed to reduce contrast and reflectivity). A careful study of the site shall be performed to identify appropriate colors and textures for materials; both summer and winter appearance shall be considered, as well as seasons of peak visitor use. Massing and scale of structures and the architectural character appropriate to the region where a solar facility is to be located shall be considered. Architectural character considerations shall include integration of vertical and horizontal relief variation to create shadow lines that diminish the overall visual scale and dominance of facilities. The choice of colors shall be based on the appearance at typical viewing distances and consider the entire landscape around the proposed development. Appropriate colors for smooth surfaces often need to be two to three shades darker than the background color to compensate for shadows that darken most textured natural surfaces. The BLM Standard Environmental Color Chart CC-001 and guidance shall be referenced when selecting colors.

Specific design features include the following:

- Materials and surface treatments shall repeat and/or blend with the existing form, line, color, and texture of the landscape.

- Appropriately colored materials shall be selected for structures, or appropriate stains/coatings shall be applied to blend with the project's backdrop.

- Solar panel backs shall be color-treated to reduce visual contrast with the landscape setting.

- Solar towers shall be color-treated to reduce visual contrast.

- Materials, coatings, or paints having little or no reflectivity shall be used whenever possible.

- Grouped structures shall be painted the same color to reduce visual complexity and color contrast.

- Multiple color camouflage technology applications shall be considered for projects within sensitive viewsheds and with a visibility distance that is between 0.25 and 2 mi (0.40 and 3.20 km). BLM guidance on the use of color to mitigate visual impacts should be consulted.

- Aboveground pipelines shall be painted or coated to match their surroundings.

- Consideration shall be given to the appropriate choice of monopoles vs. lattice towers for a given landscape setting. Monopoles may reduce visual impacts more effectively than lattice towers in foreground and midground views within built or partially built environments, while lattice towers tend to be more appropriate for less-developed rural landscapes, where the latticework would be more transparent against background textures and colors.

Glint and Glare

- Solar facilities shall be sited and designed properly to eliminate glint and glare effects on roadway users, nearby residences, commercial areas, or other highly sensitive viewing locations or to reduce them to the lowest achievable levels. Regardless of the solar technology proposed, a Glint and Glare Assessment, Mitigation, and Monitoring Plan must assess accurately and quantify potential glint and glare effects and determine the potential health, safety, and visual impacts associated with glint and glare. The assessment shall be conducted by qualified individuals using appropriate and commonly accepted software and procedures. The assessment results must be made available to the BLM in advance of project approval. If the project design is

changed during the siting and design process such that substantial changes to glint and glare effects may occur, glint and glare effects shall be recalculated, and the results shall be made available to BLM.

- Mirrors/heliostats shall be deployed and operated to avoid high-intensity light (glare) being reflected toward off-site ground receptors. Where off-site glare is unavoidable and project site/off-site spatial relationships favor effective results, fencing with privacy slats or similar screening materials shall be employed.

- Electricity transmission/distribution projects shall utilize nonspecular conductors and nonreflective coatings on insulators.

Night-Sky Protection

- A lighting plan shall be prepared that documents how lighting will be designed and installed to minimize night-sky impacts during facility construction and operations. Lighting for facilities shall not exceed the minimum number of lights and brightness required for safety and security and shall not cause excessive reflected glare. Low-pressure sodium light sources shall be used to reduce light pollution. Full cut-off luminaires shall be used to minimize uplighting. Lights shall be directed downward or toward the area to be illuminated. Light fixtures shall not spill light beyond the project boundary. Lights in highly illuminated areas that are not occupied on a continuous basis shall have switches, timer switches, or motion detectors so that the lights operate only when the area is occupied. Where feasible, vehicle-mounted lights shall be used for night maintenance activities. Wherever feasible, consistent with safety and security, lighting shall be kept off when not in use. The lighting plan shall include a process for promptly addressing and mitigating complaints about potential lighting impacts.

- In order to minimize night-sky impacts from hazard navigation lighting associated with solar facilities, the applicant shall use AVWS technology for any structures exceeding 200 ft (61 m) in height. If the FAA denies a permit for use of AVWS, the applicant shall limit lighting to the minimum required to meet FAA safety requirements. The use of red or white strobe lighting shall be prohibited unless BLM approves its use because of conflicting mitigation requirements.

- The use of signs and project construction signs shall be minimized. Necessary signs shall be made of nonglare materials and utilize unobtrusive colors. The reverse sides of signs and mounts shall be painted or coated by using the most suitable color selected from the BLM Standard Environmental Color Chart to reduce color contrasts with the existing landscape; however, placement and

design of any signs required by safety regulations must conform to regulatory requirements.

- Commercial symbols or signs and associated lighting on buildings or other structures shall be prohibited.

A.2.2.13.2 General Multiphase Measures

- "Good housekeeping" procedures shall be developed to ensure that the site is kept clean of debris, garbage, fugitive trash or waste, and graffiti; to prohibit scrap heaps and dumps; and to minimize storage yards. Design features for effective waste management shall be applied.

A.2.2.13.3 Construction

A pre-construction meeting with BLM landscape architects or other designated visual/scenic resource specialists shall be held before construction begins to coordinate the VRM mitigation strategy and confirm the compliance-checking schedule and procedures. Final design and construction documents will be reviewed for completeness with regard to the visual mitigation elements, assuring that requirements and commitments are adequately addressed. The construction documents shall include, but not be limited to, grading, drainage, revegetation, vegetation clearing and feathering plans, and they must demonstrate how VRM objectives will be met, monitored, and measured for conformance.

Project developers shall integrate interim/final reclamation VRM mitigation elements early in the construction process; these may include treatments, such as thinning and feathering vegetation along project edges, enhanced contour grading, salvaging landscape materials from within construction areas, special revegetation requirements, etc. Developers shall coordinate with BLM in advance to have BLM landscape architects or other designated visual/scenic resource specialists on-site during construction to work on implementing visual resource requirements and BMPs.

Visual impacts associated with construction activities can be partially mitigated by implementing the following design features, where feasible:

- Project developers shall reduce visual impacts during construction by clearly delineating construction boundaries and minimizing areas of surface disturbance; preserving vegetation to the greatest extent possible; utilizing undulating surface disturbance edges; stripping, salvaging, and replacing topsoil; using contoured grading; controlling erosion; using dust suppression techniques; and restoring exposed soils to their original contour and vegetation.

- A Decommissioning and Site Reclamation Plan shall be in place prior to construction. Reclamation of the construction site shall begin immediately after construction to reduce the likelihood of visual contrasts associated with erosion and invasive weed infestation and to reduce the visibility of temporarily disturbed areas as quickly as possible.

- Visual impact mitigation objectives and activities shall be discussed with equipment operators before construction activities begin.

- Existing rocks, vegetation, and drainage patterns shall be preserved to the maximum extent possible.

- Brush-beating, mowing, or using protective surface matting rather than removing vegetation shall be employed where feasible.

- Slash from vegetation removal shall be mulched and spread to cover fresh soil disturbances as part of the revegetation plan. Slash piles shall not be left in sensitive viewing areas.

- All areas of disturbed soil shall be reclaimed by using weed-free native grasses, forbs, and shrubs representative of the surrounding and intact native vegetation composition and/or using non-native species, if necessary, to ensure successful revegetation.

- The visual color contrast of graveled surfaces shall be reduced with approved color treatment practices.

- Horizontal and vertical pipeline bending shall be used in place of cut-and-fill activities where feasible.

- Road-cut slopes shall be rounded, and the cut-and-fill pitch shall be varied to reduce contrasts in form and line. The slope shall be varied to preserve specimen trees and nonhazardous rock outcroppings.

- Topsoil from cut-and-fill activities shall be segregated and spread on freshly disturbed areas to reduce color contrast and aid rapid revegetation. Topsoil piles shall not be left in sensitive viewing areas.

- Excess fill material shall not be disposed of downslope, in order to avoid creating color contrast with existing vegetation and soils.

- Excess cut-and-fill materials shall be hauled in or out to minimize ground disturbance and impacts from fill piles.

- Natural or previously excavated bedrock landforms shall be sculpted and shaped when excavation of these landforms is required, and landforms shall

conform to the requirements listed and further described under A.2.2.13.1, Siting and Design. Half-case drill traces from pre-split blasting shall not remain evident in the final rock face. The color contrast from the excavated rock faces shall be removed by color-treating with a rock stain. Native vegetation (where feasible) or a mix of native and non-native species (if necessary to ensure successful revegetation) shall be reestablished with the benches and cavities created within the created bedrock formation.

- Communication and other local utility cables shall be buried where feasible.

- Culvert ends shall be painted or coated to reduce color contrasts with the existing landscape.

- No paint or permanent discoloring agents shall be applied to rocks or vegetation to indicate surveyor construction activity limits.

- All stakes and flagging shall be removed from the construction area and disposed of in an approved facility.

A.2.2.13.4 Operations

Terms and conditions for VRM mitigation compliance shall be maintained and monitored for compliance with visual objectives, adaptive management adjustments, and modifications, as necessary and approved by the BLM landscape architect or other designated visual/scenic resource specialist.

Visual impacts associated with operation and maintenance activities could be partially mitigated by implementing the following measures, where applicable:

- The project developer shall maintain revegetated surfaces until a self-sustaining stand of vegetation is reestablished and visually adapted to the undisturbed surrounding vegetation. No new disturbance shall be created during operations without completion of a VRM analysis and approval by the authorized officer.

- Interim restoration shall be undertaken during the operating life of the project as soon as possible after disturbances.

- Maintenance activities shall include dust abatement (in arid environments) and noxious weed control.

- Road maintenance activities shall avoid blading existing forbs and grasses in ditches and adjacent to roads.

- Painted facilities shall be kept in good repair and repainted when the color fades or flakes.

- Color-treated solar panel/mirror backs/supports shall be kept in good repair and be retreated when the color fades and flakes.

A.2.2.13.5 Decommissioning/Reclamation

A Decommissioning and Site Reclamation Plan, covering visual impact design features, shall be in place prior to construction, and reclamation activities shall be undertaken as soon as possible after disturbances occur and be maintained throughout the life of the project. The following decommissioning/reclamation activities/practices can partially mitigate visual impacts associated with solar energy development, where feasible:

- Predevelopment visual conditions and the inventoried visual quality rating (A, B, C) and integrity shall be reviewed, and the visual elements of form, line, color, and texture shall be restored to predevelopment visual compatibility or to that of the surrounding landscape setting conditions, whichever achieves the better visual quality and most ecologically sound outcome.

- A Decommissioning and Site Reclamation Plan shall be developed, approved by the BLM, and implemented. The plan shall require that all aboveground and near-ground structures be removed. Some structures shall only be removed to a level below the ground surface that will allow reclamation/ restoration. Topsoil from all decommissioning activities shall be salvaged and reapplied during final reclamation. The plan shall include provisions for monitoring and determining compliance with the project's visual mitigation and reclamation objectives.

- Soil borrow areas, cut-and-fill slopes, berms, water bars, and other disturbed areas shall be contoured to approximate naturally occurring slopes, thereby avoiding form and line contrasts with the existing landscapes. Contouring to a rough texture would trap seeds and discourage off-road travel, thereby reducing associated visual impacts.

- Cut slopes shall be randomly scarified and roughened to reduce texture contrasts with existing landscapes and aid in revegetation.

- A combination of seeding, planting nursery stock, and transplanting local vegetation within the proposed disturbance areas and staging of construction enabling direct transplanting shall be considered. Where feasible, native vegetation shall be used for revegetating, to establish a composition consistent with the form, line, color, and texture of the surrounding undisturbed landscape.

- Stockpiled topsoil shall be reapplied to disturbed areas, and the areas shall be revegetated by using a mix of native species selected for visual compatibility with existing vegetation, where applicable, or by using a mix of native and non-native species if necessary to ensure successful revegetation.

- Gravel and other surface treatments shall be removed or buried.

- Rocks, brush, and forest debris shall be restored whenever possible to approximate pre-existing visual conditions.

- Edges of revegetated areas shall be feathered to reduce form and line contrasts with the existing landscapes.

- A decommissioning VRM monitoring and compliance plan shall be prepared by the operator and approved by the BLM that establishes the schedule and terms for monitoring and the conditions and methods of measurement for determining compliance,

A.2.2.13.6 Use of Off-Site Mitigation

- In addition to mitigation measures that directly reduce the impacts of solar energy and associated facilities, the off-site mitigation of visual impacts may be an option in some situations. Off-site mitigation shall be considered in situations where nonconforming proposed actions may lead to changing the VRM class objectives through an RMP amendment. Unavoidable visual impacts may then be mitigated by a correction or remediation of a nonconforming existing condition resulting from a different proposed action located within the same viewshed for impacts of approximately equal magnitude, and within the same or a more protective VRM class. The off-site mitigation serves as a means to offset and recover the loss of visual landscape integrity. For example, off-site mitigation could include reclaiming unnecessary roads, removing abandoned buildings, reclaiming abandoned mine sites, putting utility lines underground, rehabilitating and revegetating existing erosion or disturbed areas, or establishing scenic conservation easements. In situations where off-site mitigation opportunities are absent within the same viewshed, then different viewsheds that need mitigation of visual impacts because they could affect highly sensitive visual resources (for example, along National Scenic and Historic Trails, Wild and Scenic River corridors, Scenic or Backcountry Byways, etc.) may be considered. BLM policy guidance on off-site mitigation procedures is contained in BLM IM 2008-204, *Offsite Mitigation.*

Appendix B
Visual Contrast Rating Forms

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date
November 2025

District
California Desert District

Resource Area
Palm Springs-South Coast Field Office

Activity (program)
Battery Storage and Transmission Line Project

SECTION A. PROJECT INFORMATION

1. Project Name
Grace Solar Energy Center

2. Key Observation Point
KOP 1 – Eastbound Interstate 10

3. VRM Class
VRM Class IV (transmission line)

4. Location

Township _____

Range _____

Section _____

5. Location Sketch
Latitude: 33°36'31.50"N
Longitude: 114°45'17.73"W

Approximately 395 feet to the west of the proposed transmission line crossing of Interstate 10

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Flat valley land in foreground-middleground (FG-MG) extends to distant, prominent, and rugged mountains to the northeast. Dark and rugged silhouettes of mountains to the east are also visible.	Low and rugged desert shrubs in the immediate FG-MG north of barriers lining interstate	Wide and flat interstate cuts through the immediate FG-MG. Serious of concrete barriers lines the westbound interstate travel lane. Four thin, tall, and solid, tubular steel poles supporting multiple horizontal lines in the immediate FG-MG.
LINE	Valley terrain is flat, straight, and horizontal; mountains are rugged and angular	Shrubs are low but rugged and complex	Interstateis straight with parallel and continuous lines; barriers are regular, straight and simple; steel poles are straight and vertical, with horizontal transmission lines
COLOR	Tan interstates median in immediate FG/MG; tan to dark bluish mountains in background (BG)	Vegetation is a dark olive green with visible tones of yellow/orange	Interstate is dark grey with continuous and broken white lines; steel poles are a deep dark brownish black, with greyish transmission lines
TEXTURE	Granular to smooth land in the interstate median; distant mountains are striated and smooth	Medium to smooth textured are relatively dense north of interstate barriers	Interstate is mostly smooth but also slightly granular and striated, interstate barriers, transmission poles and lines are smooth.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No perceived changes to form of land/water.	No perceived changes to form of vegetation.	Project transmission line (strung on existing steel poles) is regular and simple
LINE	No perceived changes to lines of land/water.	No perceived changes to lines of vegetation.	Additional regular horizontal lines stretching between the two vertical poles in view; transmission line also spans the interstate alongside existing transmission lines
COLOR	No perceived changes to color of land/water.	No perceived changes to color of vegetation.	Transmission lines are greyish (similar to existing transmission line)
TEXTURE	No perceived changes to texture of land/water.	No perceived changes to texture of vegetation.	Smooth (transmission line)

SECTION D. CONTRAST RATING ☐SHORT TERM ☒LONG TERM

1. DEGREE OF CONSTRAST		FEATURES												2. Does project design meet visual resource management objectives? ☒Yes ☐No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? ☐ Yes ☒ No (Explain on reverse side)
ELEMENTS	Form				X				X				X	Evaluator's Names: Josh Saunders and Eden Vitakis Date: November 2025
	Line				X				X			X		
	Color				X				X			X		
	Texture				X				X				X	

EVALUATION – KOP 1 (Comments from Item 2)

KOP 1 is located near the eastbound travel lane of Interstate (I-) 10, approximately 395 feet to the west of the proposed transmission line span of the interstate. The existing view at KOP 1 is primarily focused on electrical transmission infrastructure in the landscape and is representative of views from the interstate corridor that are influenced by transmission lines. In addition to these features, local mountain ranges are also present and are typical features in interstate views. As viewed from KOP 1, the Project would introduce additional conductor lines to the view and more specifically, the project transmission line would be strung on the existing poles in the immediate foreground-middleground supporting the Arlington Solar Energy Center gen-tie line. The new transmission line would appear as thin, regular lines that would generally be indistinct from existing transmission lines in the view. As a result, the Project transmission line and would not attract the attention of casual observers. Color and lines contrasts would be weak and no visible form and texture contrast is anticipated. Due to presence of existing transmission lines and because the project transmission line would be co-located on existing structures, the Project would result in altogether weak visual contrast.

Given the contrasts anticipated at KOP 1, the Project would conform with VRM Class IV objectives. Visible project elements would not dominate views, and the project transmission line would lack scale or spatial dominance in the landscape.

ADDITIONAL MITIGATION MEASURES (Comments from Item 3)

Not applicable or recommended.

US. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Form 8400-4
(September 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date
November 2025

District
Palm Springs-South Coast Office

Resource Area
California Desert

Activity (program)
Battery Storage and Transmission Line Project

SECTION A. PROJECT INFORMATION

1. Project Name
Grace Solar Energy Center

2. Key Observation Point
KOP 2 – Dracker Boulevard (Northbound)

3. VRM Class
VRM Class IV (transmission line)

4. Location

Township _____

Range _____

Section _____

5. Location Sketch
Latitude: 33 38'44.47000"N
Longitude: 114 45'9.71999"W

Approximately 120 feet to the east of the project transmission line (also, 2.5 miles north of Interstate 10)

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Mostly flat valley terrain with low visible berm to east of Dracker Boulevard; gentle mounded/rolling terrain to the north that softens and extends to base of rugged, ow to high and prominent mountains in the background	Three large and complex creosote shrubs in the immediate FG/MG; small creosote and other shrub species dot the FG/MG;	Multiple thin and vertical poles supporting numerous conductor lines present to the west of Dracker Boulevard; dark paved road runs through the immediate FG/MG
LINE	Weak, random horizontal lines in FG/MG valley landscape, distinct line separating mostly flat valley and angular and rugged mountains in the BG	Irregular, vertical, and rugged lines presented by FG/MG shrubs	Steel poles present as vertical and strong, straight lines; conductor lines are horizontal but complex. Dracker Boulevard is a strong, horizontal line in the immediate FG/MG
COLOR	Valley is light to dark tan; mountains in BG are tan to dark blue to dark gray	Dark olive green shrubs and yellowish tan grasses in immediate FG/MG.	Steel poles and transmission lines are light to dark greyish and black. Dracker Boulevard is dark grey to black.
TEX-TURE	FG/MG valley terrain is patchy with coarse and fine grained soils; BG mountains are seemingly soft	Shrubs are scattered and rough in immediate FG/MG, becoming softer and denser near low mounded terrain in FG/MG	Steel poles are slightly striated and smooth (several are smooth); transmission lines are smooth. Dracker Boulevard is patchy and striated.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	No perceived changes to form of land/water.	No perceived changes to form of vegetation.	Five new and tall, steel poles added to view. Poles are thin and vertical; transmission lines are horizontal and regular
LINE	No perceived changes to lines of land/water.	No perceived changes to lines of vegetation.	Transmission poles are straight and relatively weak; transmission lines are regular, relatively weak and simple
COLOR	No perceived changes to color of land/water.	No perceived changes to color of vegetation.	New steel poles and transmission lines are greyish in color
TEXTURE	No perceived changes to texture of land/water.	No perceived changes to texture of vegetation.	New steel poles and transmission lines are soft, smooth, and metallic

SECTIOND. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONSTRAST		FEATURES												2. Does project design meet visual resource management objectives? ☒ Yes ☐ No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended? ☐ Yes ☒ No (Explain on reverse side)
ELEMENTS	Form				X				X			X		Evaluator's Names: Josh Saunders and Eden Vitakis Date: November 2025
	Line				X				X			X		
	Color				X				X			X		
	Texture				X				X			X		

EVALUATION – KOP 2 (Comments from Item 2)

KOP is located on northbound Dracker Boulevard, approximately 2.5 miles to the north of Interstate 10 and 120 feet to east of the existing Arlington Solar Energy Center gen-tie line. From this vantage point, scattered creosote and other shrubs of varying heights, widths, and densities are spread across the valley terrain and numerous white rocks line a shallow basin that parallels the southbound lane of Dracker Boulevard. The local terrain is mostly flat with a few visible mounds to the east and north of KOP 2. Multiple tall and vertical steel poles are located in the immediate FG/MG to the west of Dracker Boulevard. As shown in the visual simulation for KOP 2, five (5) new steel poles supporting the project transmission line would extend from east to west across the view. The transmission line would span Dracker Boulevard, pass beneath the existing Arlington Solar Energy Center gen-tie line, and then be strung on structures supporting the Arlington Solar Energy Center gen-tie line. New poles would be visible from KOP 2 but would present a similar form and line as existing poles in the landscape. Their specific location and east-west alignment in the FG/MG landscape would slightly heighten contrast ; however, their apparent scale would be reduced by distance. New poles and line would interrupt the available view to distant mountain but due to their narrow form and line, effects would not be substantial/adverse. Due to the presence of existing electrical transmission line infrastructure in the immediate FG/MG of the view, and because new transmission line poles and lines would appear similar to existing transmission poles and lines, overall contrasts associated with visible project features would be weak.

As viewed from KOP 2, visible Project components (specifically, the transmission line) would conform with VRM Class IV objectives. Visible project elements would not dominate views, Project components would lack scale or spatial dominance in the landscape, and the valley and mountain terrain would remain visually dominant.

ADDITIONAL MITIGATION MEASURES (Comments from Item 3)

Not applicable or recommended.

US. GOVERNMENT PRINTING OFFICE: 1985-461-988/33094

Appendix C
Glare Analysis Report

Grace Solar Project

NextEra Energy Resources

Riverside County, California

Glint & Glare Analysis

Analysis by Priya Gunduboina

October 27, 2025

Capitol Airspace Group

capitolairspace.com

(703) 256 - 2485

Introduction

NextEra Energy Resources is proposing to construct off-airport photovoltaic (PV) arrays in Riverside County, California (gray areas, ***Figure 1***). On behalf of NextEra Energy Resources, Capitol Airspace performed an independent glare analysis utilizing ForgeSolar's GlareGauge toolset. The purpose of this analysis was to identify the potential for glare impacts on low-level receptors within one half-mile of the proposed solar area, as well as public-use airport approach paths within five miles of the proposed solar area. Specifically, this analysis considered the potential for glare impacts on Blythe (BLH), as well as a nearby residence.

Currently, there are no defined federal standards for acceptable ocular impact on roadways and residences. However, many local zoning authorities have established standards for studying the ocular impacts on nearby airport approaches, air traffic control towers, residences, roadways, and railroads.

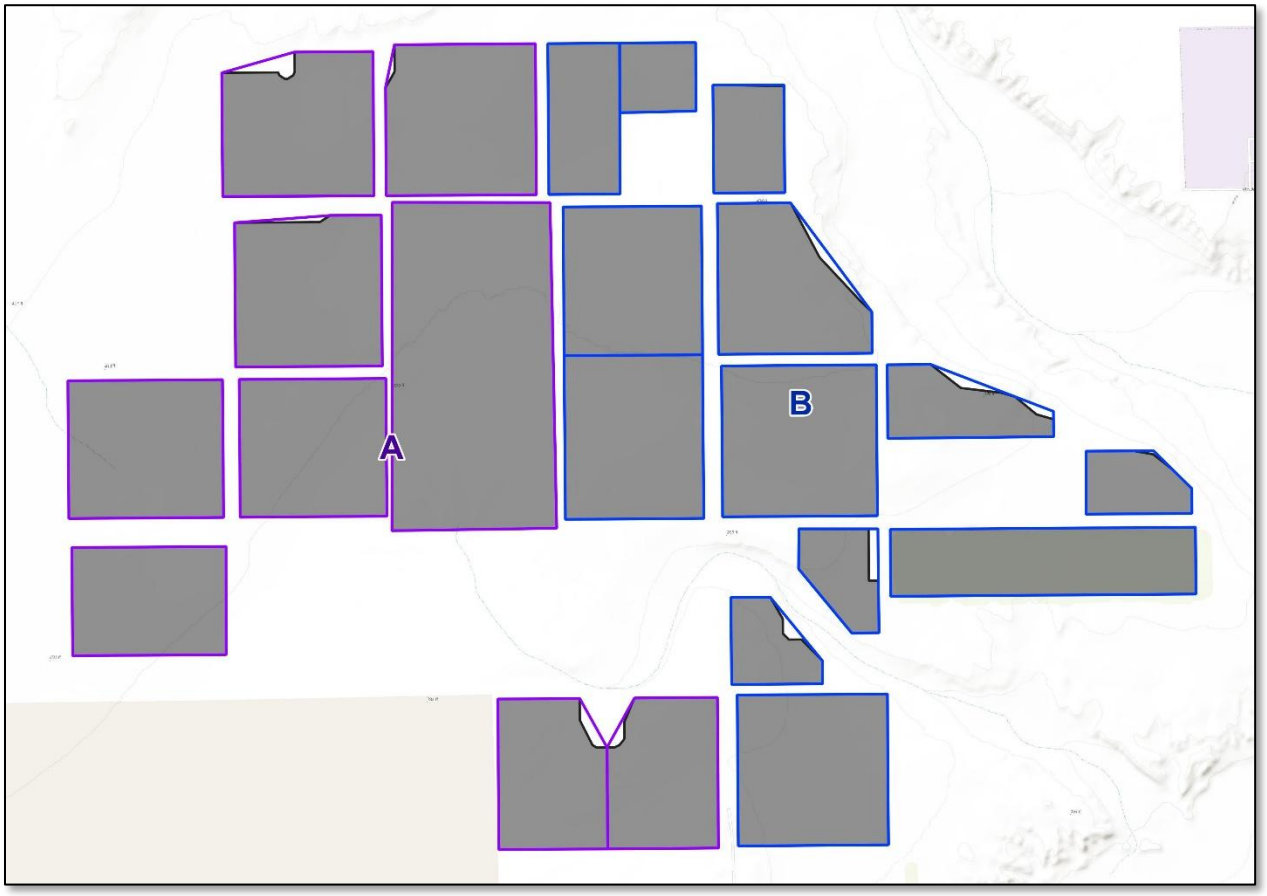


Figure 1: Grace Solar project PV panel layout (gray)
with GlareGauge assessment areas (purple and blue outlines)

Methodology

In cooperation with the Department of Energy, the Federal Aviation Administration (FAA) developed and validated the Sandia National Laboratories Solar Glare Hazard Analysis Tool (SGHAT), now licensed through ForgeSolar as GlareGauge. ForgeSolar has enhanced GlareGauge for glare hazard analysis beyond the aviation environment. These enhancements include a route module for analyzing roadways and railroads and an observation point module for analyzing residences. However, GlareGauge does not account for physical obstructions between reflectors and receptors, which may mitigate identified glare impacts.

GlareGauge analyzes the potential for glare over the entire calendar year in one-minute intervals, from when the sun rises above the horizon until the sun sets below the horizon. The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. When GlareGauge identifies glare, the associated ocular impact is quantified into three categories based on the retinal irradiance and subtended angle (size/distance) of the glare source. These three categories are Green – low potential for after-image, Yellow – potential for after-image, and Red – potential for retinal burn (***Figure 2***).

The FAA policy for *Review of Solar Energy System Projects on Federally Obligated Airports* requires that proposed on-airport solar projects will not result in ocular impacts (no glare of any category) on the airport's ATCT cab. Although not required, the FAA encourages that off-airport solar energy systems in proximity to airports with ATCTs are assessed for potential ocular impact. Currently, there are no defined federal standards for acceptable ocular impact on residences or roadways.

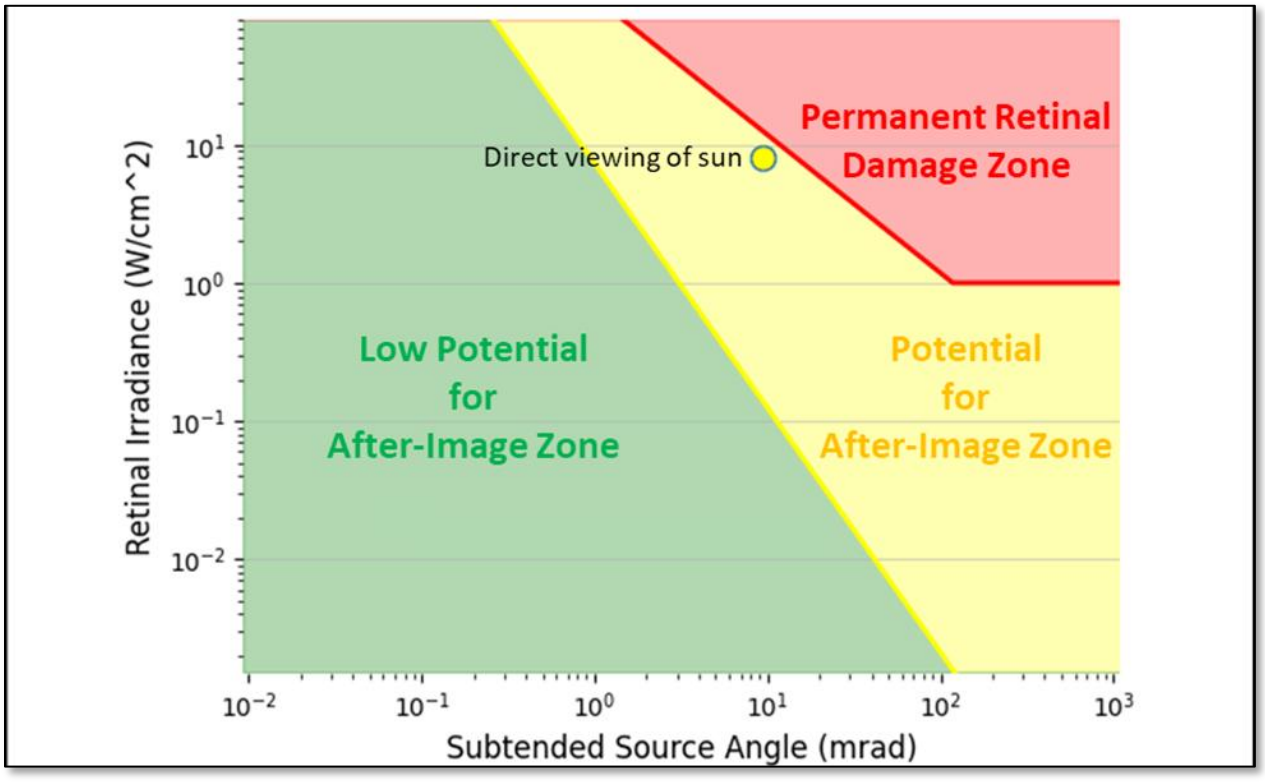


Figure 2: GlareGauge glare hazard plot depicting ocular impact as a function of retinal irradiance and subtended source angle

Data

PV array specifications (***Table 1***) as well as location and height information were provided by NextEra Energy Resources. Based on this data, the PV arrays will rotate to track the sun through the range of rotation determined by the maximum tracking angle. When the sun's position is outside the range of rotation, the single-axis tracking arrays will use a slope-aware shade backtracking strategy to reduce row-to-row shading (***Figure 3*** & ***Figure 4***). Backtracking will begin and end at a zero-degree or 30-degree resting angle as defined by the Resting Angle/Backtracking Limit parameter.

Runway end coordinates, elevations, threshold crossing heights (TCH), and visual glidepath angles (VGPA) were obtained from the FAA National Flight Data Center (NFDC) National Airspace System Resource (NASR) dataset. When the NASR dataset did not contain this data, aerial imagery, the United States Geological Survey (USGS) 1/3 arc-second Digital Elevation Model (DEM), and the FAA approved default settings (TCH: 50 feet, VGPA: 3.00°) were used.

In collaboration with NextEra Energy Resources, Capitol Airspace used aerial imagery to determine observation point locations. Capitol Airspace utilized the USGS 1/3 arc-second digital elevation model (DEM) to determine the observation point ground elevations. The GlareGauge toolset calculated ground elevations along the assessed routes using the Google Elevation service.

Table 1: Grace Solar project PV array specifications

Parameter	Value
Rotation Axis Height	3 feet
Axis Tracking	Single-Axis Rotation
Tracking Axis Orientation	180°
Max Tracking Angle	±52°
Backtracking Strategy	Shade-slope
Resting Angle/Backtracking Limit	0° (except subarrays A03 and A04) 30° (subarrays A03 and A04)
Ground Coverage Ratio (GCR)	0.4
Panel Material	Smooth Glass with ARC

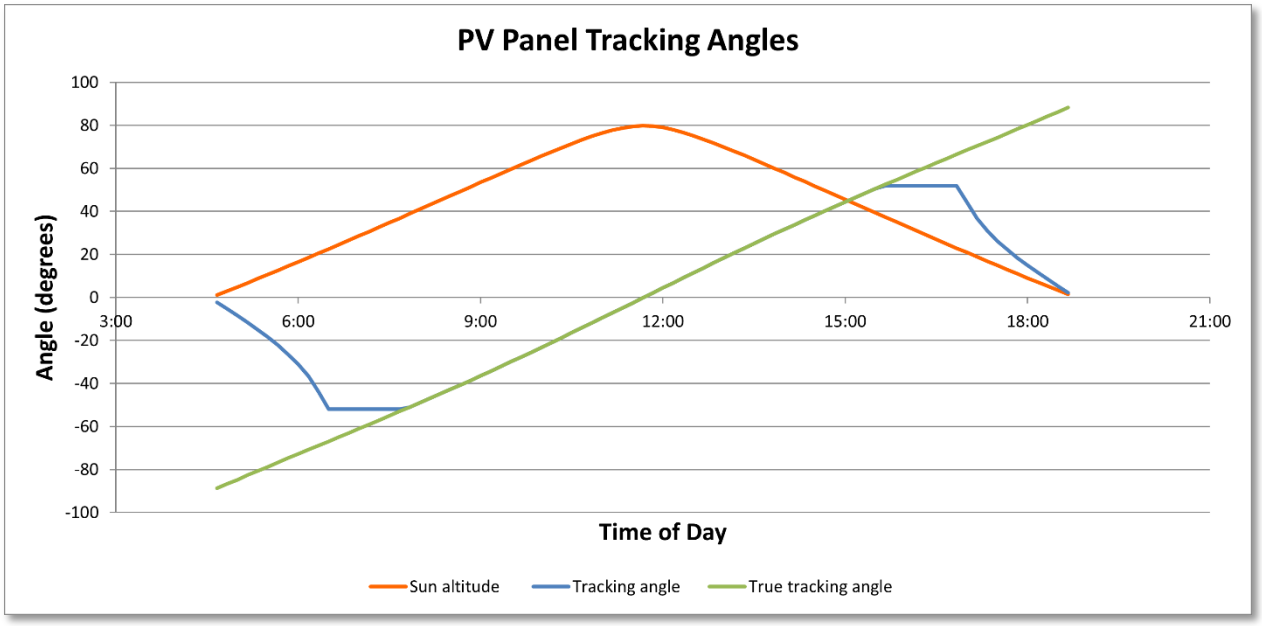


Figure 3: Sample PV panel tracking angle plot for June 21st (excluding A03 and A04)

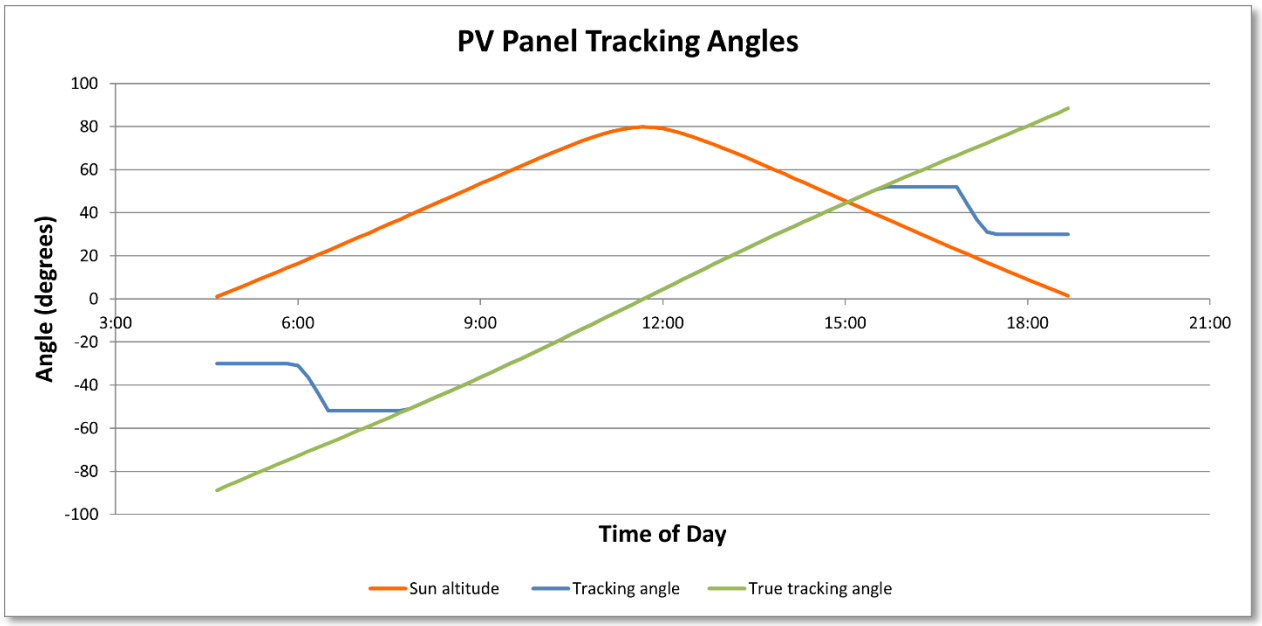


Figure 4: Sample PV panel tracking angle plot for June 21st (only A03 and A04)

Results

Blythe (BLH)

GlareGauge assessed the potential for glare occurrences along four existing approach path receptors (hatched black lines, ***Figure 5***). Additionally, Blythe (BLH) has a "plan on file" to extend Runway 08/26 to the west. Therefore, Capitol Airspace additionally assessed the extended Runway 08 runway end (hatched orange line, ***Figure 5***). Each approach path was assessed using a pilot restricted view with a vertical view restriction of 30 degrees downward and an azimuthal view restriction of 50 degrees left and right (100-degree total field-of-view).

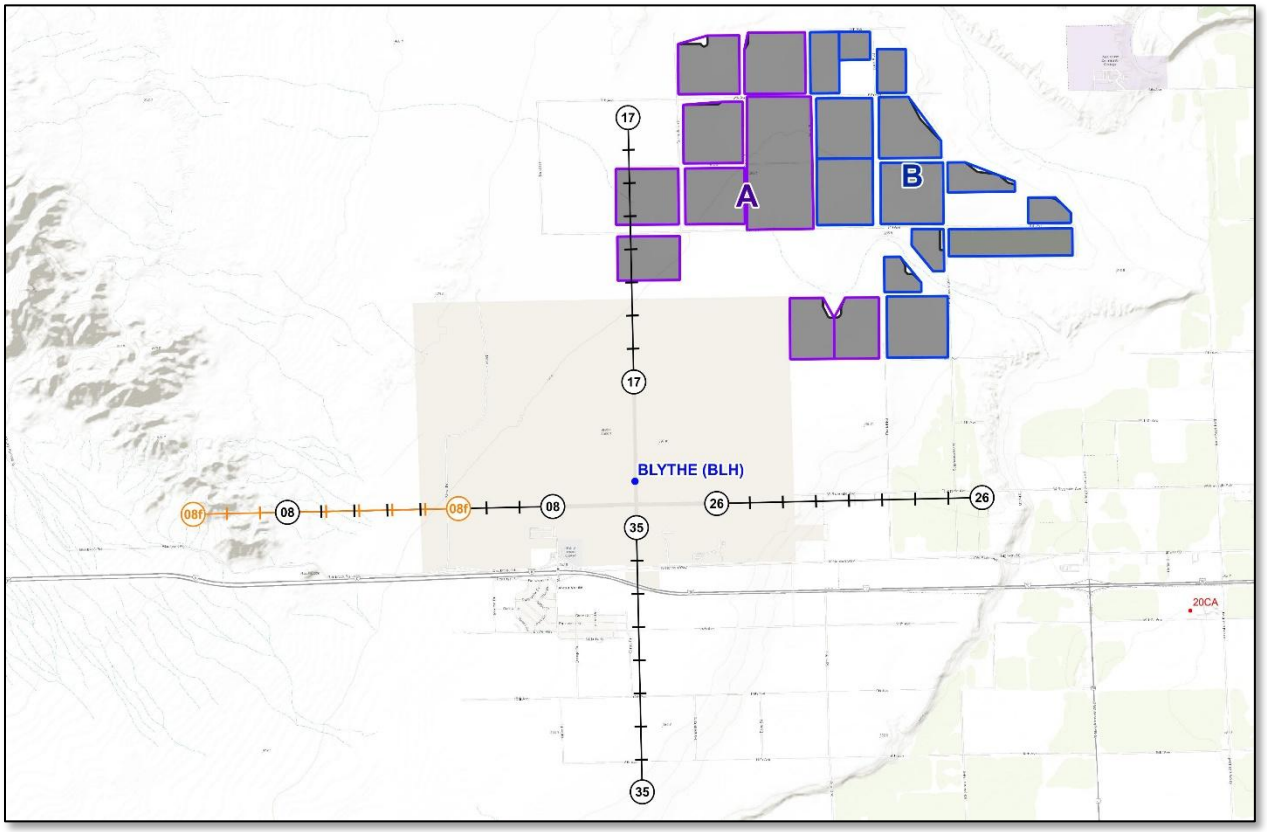


Figure 5: Blythe (BLH) approach paths (hatched black and orange lines) in proximity to the Grace Solar project

Runway 08

GlareGauge predicts green glare occurrences along a portion of the two-statute mile approach path (green segment, ***Figure 6***). Specifically, green glare would emanate from subarrays A02 – A07, B03 – B05, and B07 – B13 (faded green areas, ***Figure 6***). Green glare would occur in the morning from mid-April to late-August (***Table 2*** & ***Figure 8***). Since Blythe (BLH) has a plan to extend Runway 08/26 to the west, an approach path to the potential future Runway 08f was also considered (hashed orange line, ***Figure 5***). GlareGauge predicts green glare occurrences along a portion of the future two-statute mile approach path (green segment, ***Figure 6***). These glare occurrences are a result of sub-arrays A02, A05 – A07, B03 – B05, and B07 – B13 (faded green areas, ***Figure 6***). Green glare would occur in the morning from early-April to early-September (***Table 2*** & ***Figure 8***).

Runway 17
GlareGauge predicts green glare occurrences along a portion of the two-statute mile approach path (green segment, ***Figure 6***). These glare occurrences are a result of sub-arrays A03 and A04 (faded green areas, ***Figure 6***). Green glare would occur in the morning and afternoon from early-October to early-March (***Table 2*** & ***Figure 9***).

Runway 26
The GlareGauge results do not predict glare occurrences along the approach path.

Runway 35
The GlareGauge results do not predict glare occurrences along the approach path.

The glare resulting from the proposed single-axis rotation tracking arrays occur in the morning and the afternoon when the sun altitude is no greater than 36-degrees above the horizon. Green glare is associated with a low potential for temporary after-image.

Table 2: Predicted glare durations for Blythe (BLH) approach paths

Receptor	Glare	Date		Monthly Frequency	Time (HH:MM)		Daily Duration (Minutes)	
		Start	End		Earliest	Latest	Longest	Average
Runway 08	**Green**	11-Apr	31-Aug	Continuous	04:33	05:20	8	6
Runway 08f	**Green**	08-Apr	03-Sep	Continuous	04:33	05:24	8	6
Runway 17	**Green**	03-Oct	10-Mar	Continuous	08:14	15:02	383	247
Runway 26	None	-	-	-	-	-	-	-
Runway 35	None	-	-	-	-	-	-	-

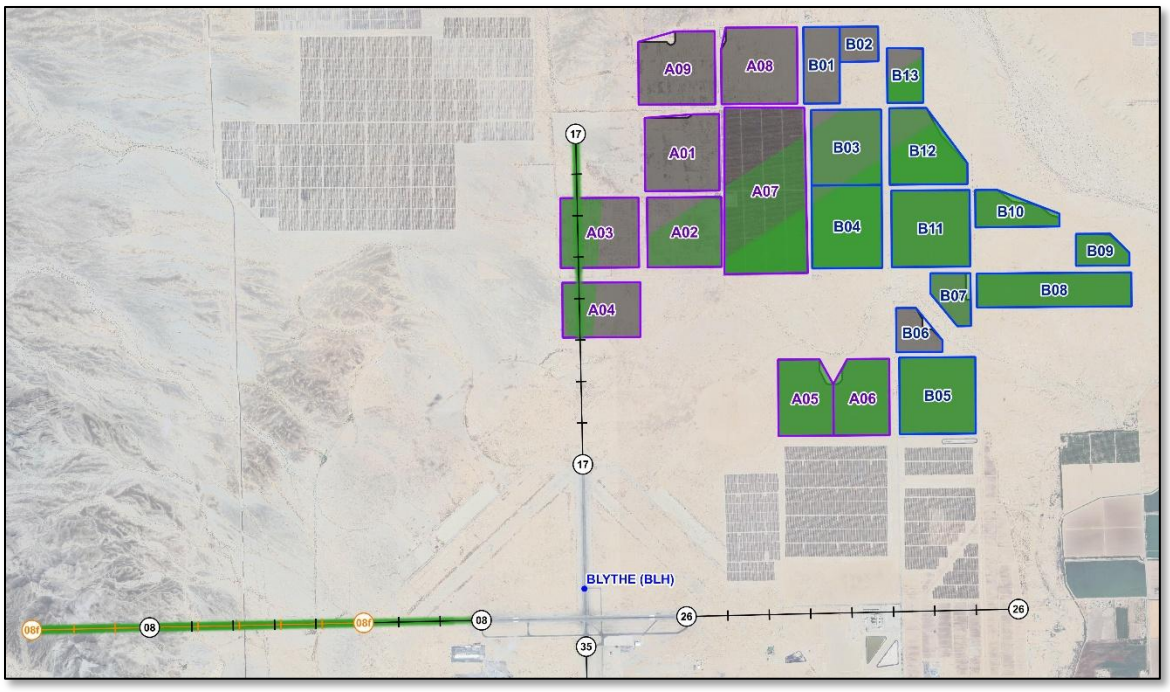


Figure 6: Blythe (BLH) Runway 08, Runway 08f, and Runway 17 approach paths with segments receiving glare (green segments along approach paths)

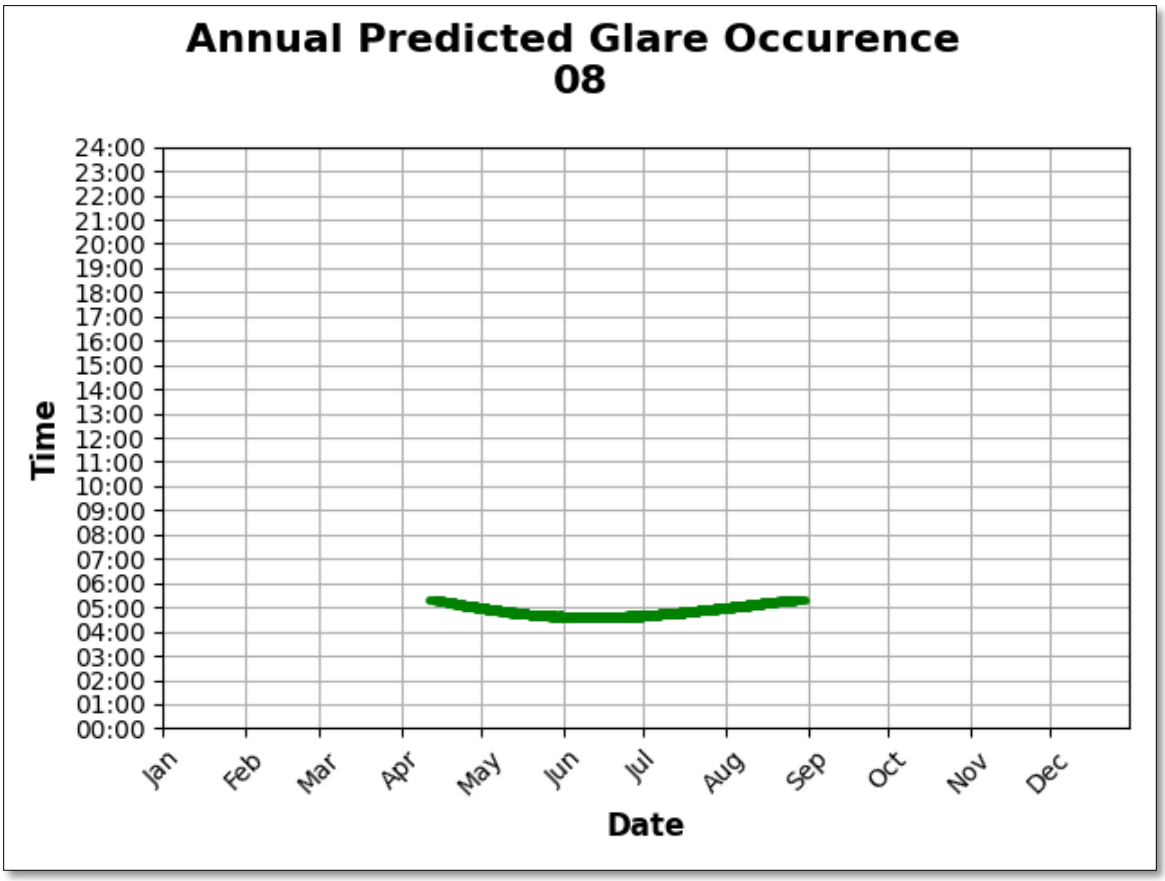


Figure 7: Annual predicted glare occurrence plot for Blythe (BLH) Runway 08

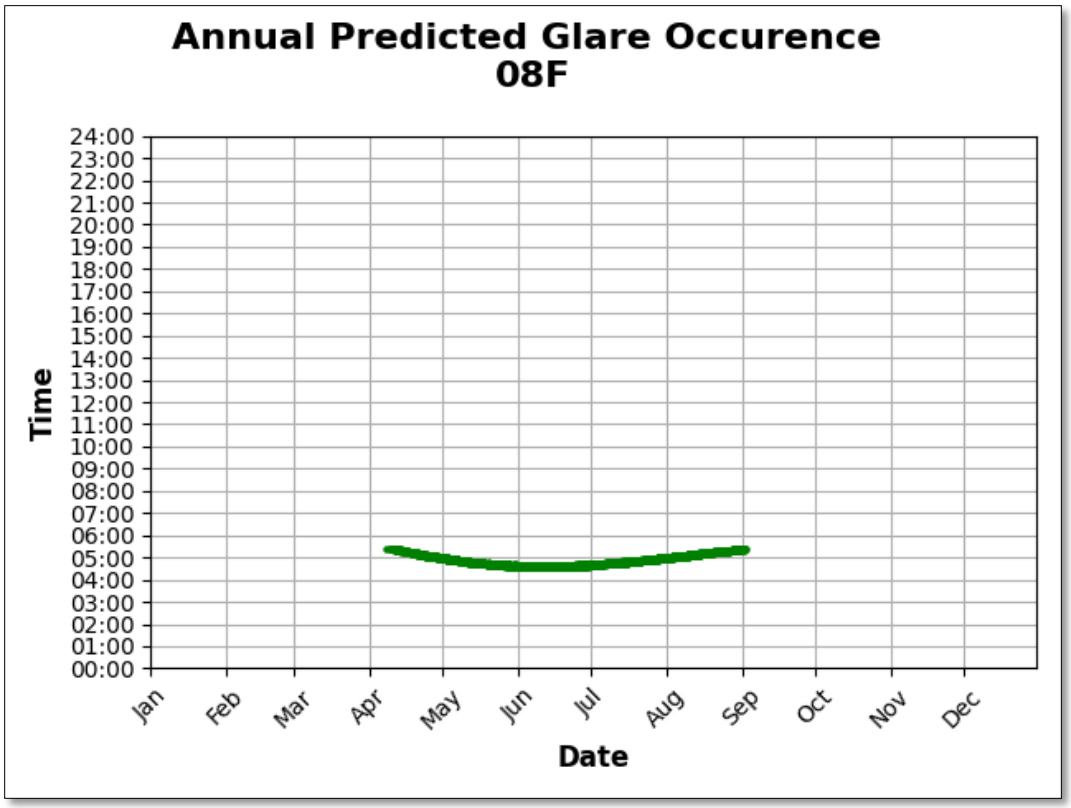


Figure 8: Annual predicted glare occurrence plot for Blythe (BLH) for Runway 08f

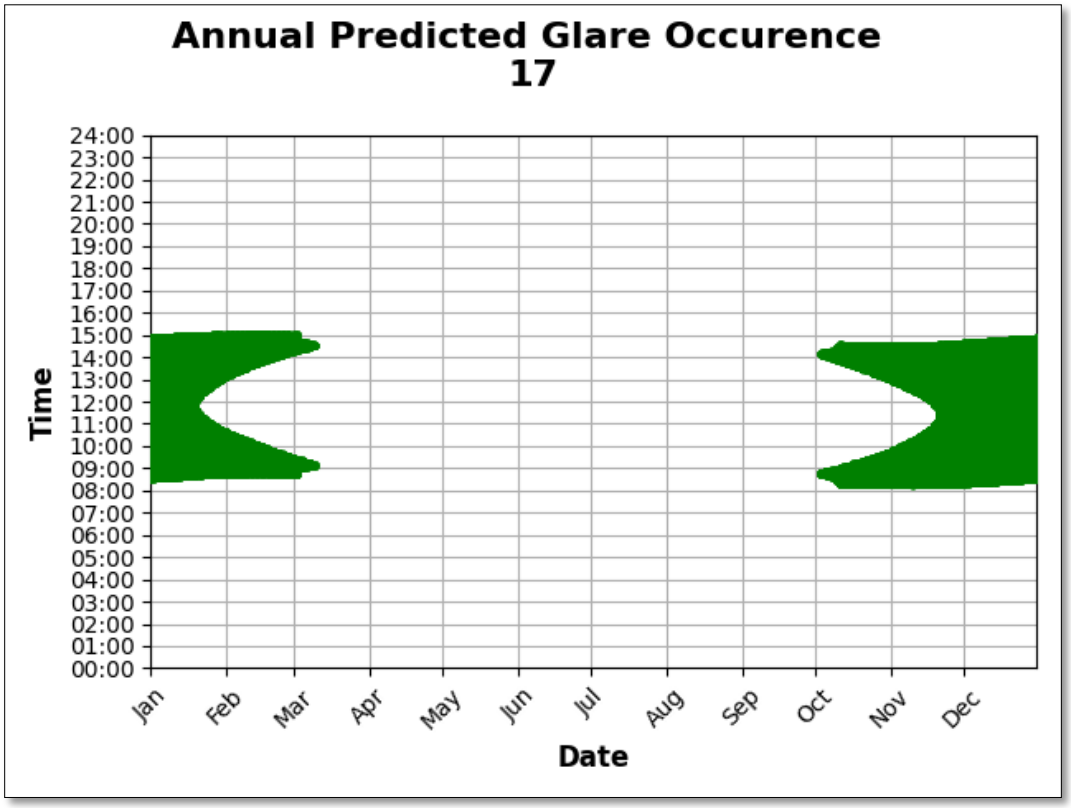


Figure 9: Annual predicted glare occurrence plot for Blythe (BLH) for Runway 17

Observation Points

GlareGauge assessed the potential for glare occurrences at one discrete observation point receptor (black point, ***Figure 10***). Each observation point was assessed at an eight-foot first story viewing height and a 16-foot second story viewing height.

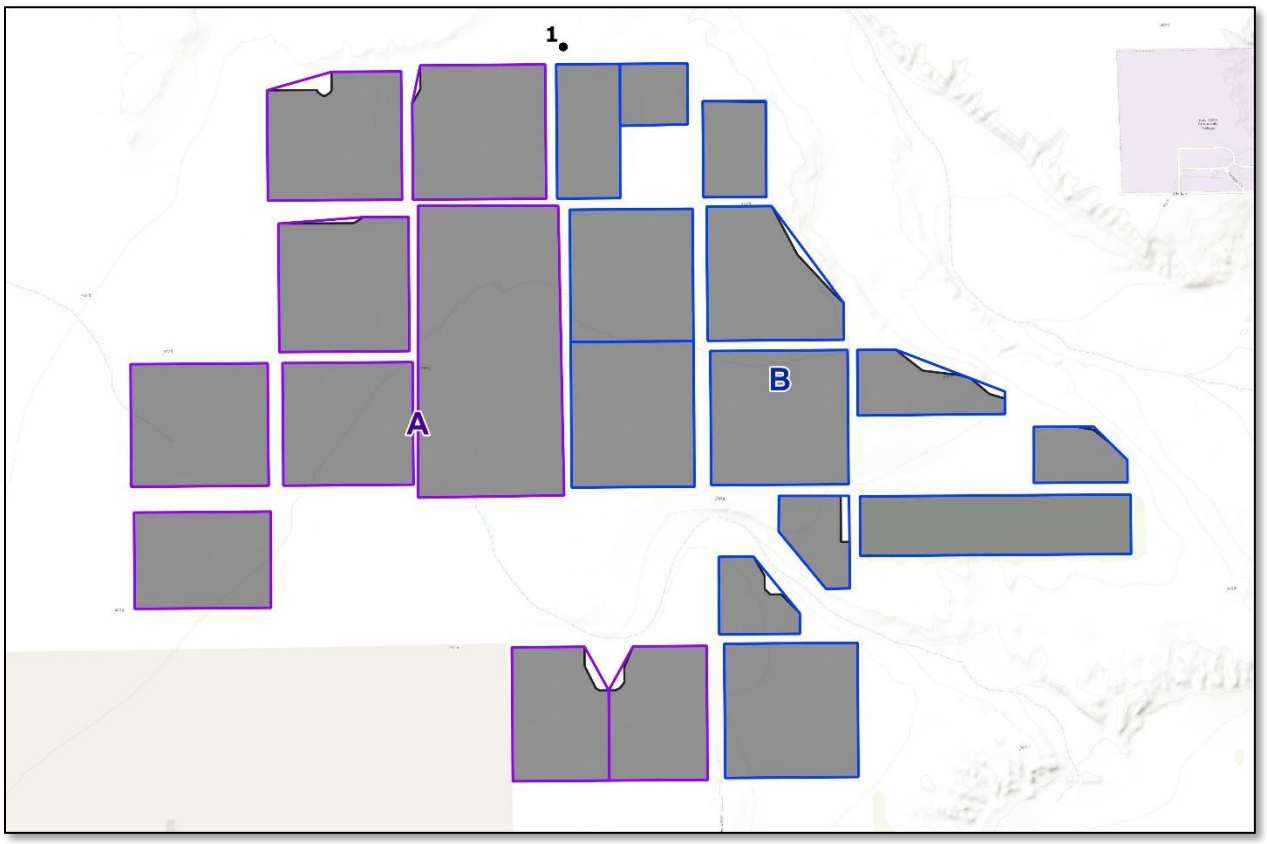


Figure 10: Discrete observation point receptors (black points) in proximity to the Grace Solar Project

The GlareGauge results predict brief green glare occurrences for OP 1 as a result of sub-arrays A08, A09, B01, B02, and B13 (faded yellow and green areas, ***Figure 11***). Green glare is associated with a low potential for temporary after-image and would occur in the early-morning and late-afternoon from late-September to mid-February (***Table 3*** & ***Figure 11***). Additionally, the GlareGauge results predict brief yellow glare occurrences for OP 1 as a result of sub-array B02 (faded yellow and green area, ***Figure 11***). Yellow glare is associated with the potential for temporary after-image and would occur in the morning from late-October to early-December (***Table 3*** & ***Figure 11***). These results are based on the application of FAA glare standards in the absence of non-aviation regulatory guidelines.

The glare resulting from proposed single-axis tracking arrays occur during early morning and late afternoon backtracking when the sun altitude is no greater than one degree above the horizon. As a result, avoiding shallow backtracking angles in the early morning or late evening could mitigate the identified glare occurrences. Further analysis may be conducted to identify effective approaches for mitigating the predicted glare occurrences.

Table 3: Predicted glare occurrences for discrete observation point receptors in proximity to the Grace Solar Project

Receptor	Glare	Date		Monthly Frequency	Time (HH:MM)		Daily Duration (Minutes)	
		Start	End		Earliest	Latest	Longest	Average
OP 1	Green	26-Sep	10-Mar	Intermittent	05:43	17:23	10	5
	Yellow	30-Oct	04-Jan	Intermittent	06:06	16:37	4	2



Figure 11: Discrete observation point receptor (yellow point) receiving glare

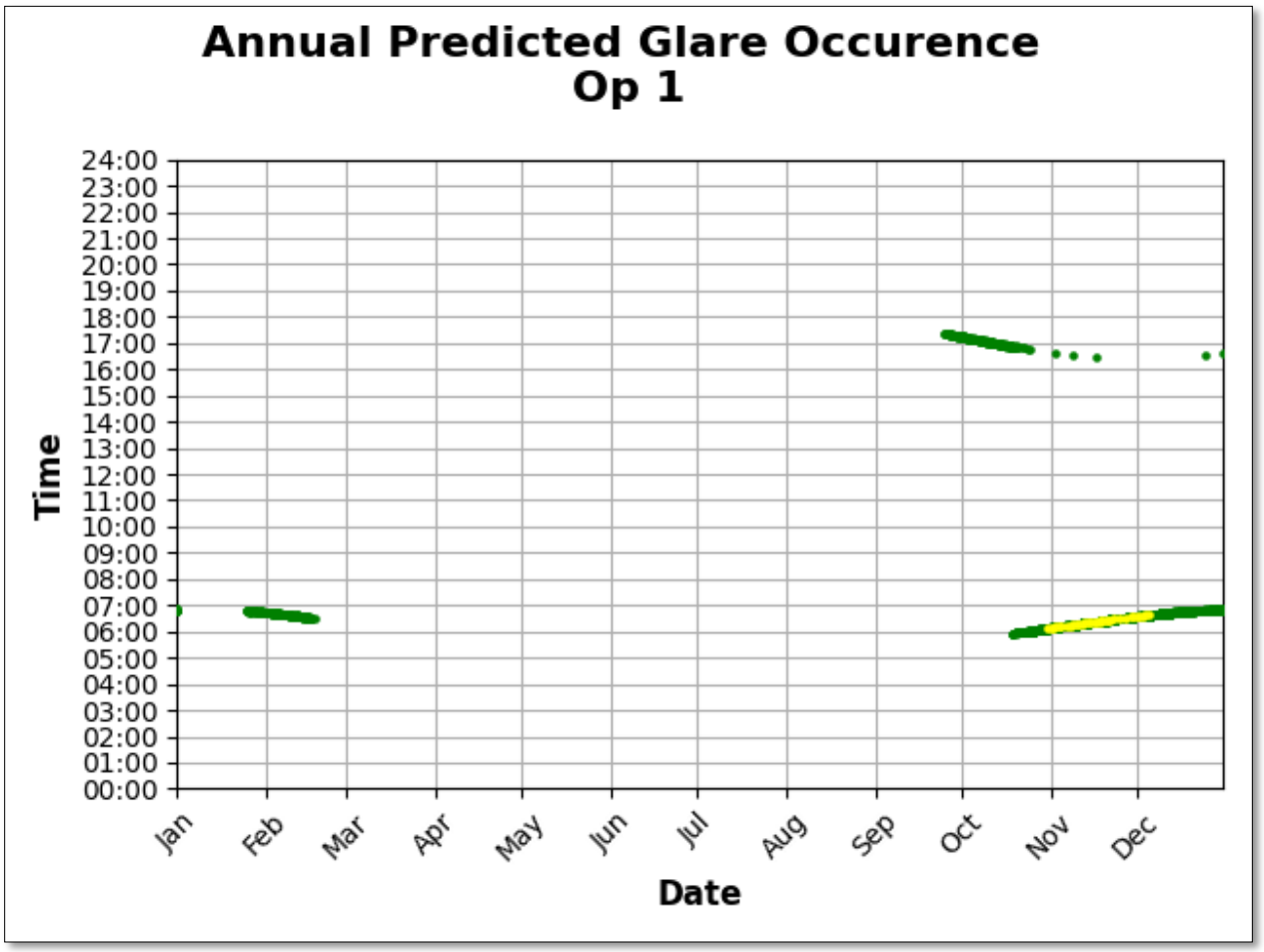


Figure 12: Annual predicted glare occurrence plot for observation point 1

Conclusion

Capitol Airspace performed a glare analysis utilizing ForgeSolar's GlareGauge toolset to identify the potential for glare impacts resulting from the proposed Grace Solar project. Specifically, this analysis considered the potential for glare impacts on the Blythe (BLH) approaches as well as a nearby residence.

Aircraft Approaches

GlareGauge predicts brief green glare occurrences in the morning from mid-April to late-August for aircraft approaching Blythe (BLH) Runway 08.

GlareGauge predicts brief green glare occurrences in the morning and from early-April to early-September for aircraft approaching Blythe (BLH) potential future Runway 08f.

GlareGauge predicts brief green glare occurrences in the morning and afternoon from early-October to early-March for aircraft approaching Blythe (BLH) Runway 17.

The glare resulting from the proposed single-axis rotation tracking arrays occurs in the morning and evening, when the sun altitude is no greater than 36-degrees above the horizon. Green glare is associated with a low potential for temporary after-image that the FAA has historically deemed acceptable in the cockpit of aircraft. Yellow glare is associated with the potential temporary after-image.

Low-Level Receptors

GlareGauge predicts brief green and yellow glare occurrences for OP 1 from late-September to mid-February. The glare resulting from the proposed single-axis tracking array occurs during morning and late afternoon backtracking when sun altitude angles are no greater than one degree above the horizon.

As noted in the methodology, this glare analysis does not consider vegetation, fencing, or other natural obstructions. This glare analysis takes the most conservative approach in assessing the possibility of glare occurrences. Further analysis may be conducted to identify effective approaches for mitigating the predicted glare occurrences.

The GlareGauge component data used to conduct this analysis is available upon request. If you have any questions regarding the findings in this analysis, please contact ***Dan Underwood*** or ***Priya Gunduboina*** at (703) 256-2485.