

6.5 VISUAL RESOURCES

As described in detail below impacts of the Modified Project to visual resources are expected to be less than or equal to those of the Approved Project.

6.5.1 Summary of Project Changes Related to Visual Resources

Under the Modified Project, changes to the Approved Project with respect to visual resource impacts would include:

- Elimination of SunCatchers;
- addition of PV modules;
- relocation of the main services complex and on-site substation; and
- reduction of transmission towers.

These changes are shown on Figure 2-2 and a list of the prominent structures is shown on Table 2-1.

6.5.2 Changes in Environmental Impacts

The Commission Decision concluded that visual impacts under the Approved Project would be significant over an area of almost 10 square miles; views from I-40 and Route 66 would be significantly impacted by the Approved Project. Additionally, the Commission concluded that views from the Wilderness Study Area (WSA) north of the Project and from a nearby residence may be adversely impacted, although at levels that would be less than significant. The Commission also determined that, while mitigation would reduce impacts, the Approved Project would significantly impact visual resources.

The Modified Project would reduce the size and dominance of the Project features, compared to the Approved Project. While the Modified Project would be substantially similar to the Approved Project, the footprint of the site has been significantly reduced. The visual character of the area would continue to be significantly impacted by the Modified Project and, thus, significant impacts would remain. Specific changes in Project impacts are detailed below. Visual impacts were assessed based on the degree of change coupled with viewer response (viewer response is evaluated based on viewer exposure and sensitivity). Viewer response is assumed to remain unchanged, under the Modified Project, from the analysis presented in the Approved Project. Therefore, the analysis below focuses on the modifications to the degree of change under the Modified Project.

6.5.2.1 Visual Sphere of Influence

The Approved Project's Visual Sphere of Influence represents the area within which the Project could be seen and potentially would result in significant effects to visual resources (Figure 6.5-1, Sensitive Visual Resources Visual Sphere of Influence Map). A viewshed model was run using the heights and location of significant project structures to demonstrate the areas that are expected to have views of the Approved Project. The results of the viewshed model are shown as the shaded areas in Figure 6.5-1, which also includes the Key Observation Points (KOPs). This model represents a conservative analysis because it was based on the 8,230-acre proposed Project footprint and features including the use of SunCatchers for the entire Project site.

6.5.2.2 Key Observation Points

KOPs are viewing locations chosen to be representative of the view from the most visually sensitive areas of the. In the Commission Decision, the inventory of KOPs included three component: (1) identification and photo-documentation of viewing areas and potential KOPs; (2) classification of visual sensitivity of KOPs; and (3) description of the visibility of Modified Project from the KOPs. KOPs were identified based on a review of available land use data, field inspection, and discussion with Commission staff responsible for the evaluation of visual resources. In order to evaluate the change in the Modified Project's appearance, simulations are being developed to depict the expected appearance. While simulations were included in the First Petition, the simulations included SunCatchers and other dominant structures that have been eliminated or reduced. The visual simulations for the new layout and use of 100 percent PV panels for the Modified Project were not complete at the time of filing of this Petition. When complete they will be submitted under separate cover. However, in every case we anticipate that the visual impact will be less from all KOPs, although not likely to be considered less than significant from all KOPs.

6.5.2.3 Glint and Glare

The Commission Decision determined that, with the adoption of mitigation measures, the impacts from Project glare would be less than significant. The potential for glint and glare from the PV modules associated with the Modified Project is expected to be substantially less than the glint and glare analyzed for the SunCatcher technology during licensing proceedings. PV technology would primarily absorb rather than reflect sunlight, and, while there is potential for glint and glare under the Modified Project, it would be substantially less than with the Approved Project. Additionally, because the same setback requirements would exist under the Modified Project, impacts from glint and glare are expected to be less significant than those associated with the Approved Project

K Road Calico Solar LLC has commissioned a glint and glare study to specifically evaluate the potential effects of glint and glare on BNSF railroad operations. Two specific concerns have been raised by BNSF and are the subject of the study. The first is the potential to cause flash blindness to an engineer on a train. The second is the potential to interfere with the ability of the engineer to see railroad traffic signals. The glint and glare study will be submitted under separate cover.

6.5.2.4 Nighttime Lighting

Lighting used in the construction and operation of the Modified Project is expected to be similar to the proposed lighting analyzed in the Commission Decision. Therefore, the Modified Project would not cause substantial changes to impacts from nighttime lighting during construction and operation.

6.5.3 Changes in Cumulative Environmental Impacts

The Commission Decision concluded that the anticipated visual impacts from the Approved Project in combination with other past and reasonably foreseeable future projects in the immediate Project viewshed would be cumulatively considerable, significant and unmitigable. Under the Modified Project, no new foreseeable future actions beyond those presented in the Commission Decision have been identified. Impacts on visual resources from the Modified Project are expected to be the same as those presented in the Commission Decision and, therefore, no additional cumulative impacts would occur.

6.5.4 Changes in LORS Conformance and Other Permits

In the Commission Decision, the Commission concluded that, with the implementation of the Conditions, the Approved Project would comply with all applicable LORS. As with the Approved Project, the Modified Project would comply with all applicable LORS, and no new or additional LORS have been identified.

6.5.5 Changes in Proposed Mitigation

No new or more severe impacts requiring additional mitigation would result from the Modified Project. The mitigation measures proposed in the Commission Decision would mitigate impacts associated with the Modified Project to levels that would be less than significant.

6.5.6 Changes in Conditions of Certification

The conforming changes to the Conditions for the Modified Project related to visual resources are:

SURFACE TREATMENT OF NON-MIRROR PROJECT STRUCTURES AND BUILDINGS

VIS-1 To the extent feasible, the project owner shall treat all non-mirror surfaces of all project structures and buildings visible to the public, which specifically does not include PV modules, such that a) their colors minimize visual intrusion and contrast by blending with the existing tan and brown color of the surrounding landscape; 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. This measure shall include coloring of security fencing with vinyl or other non-reflective coating such as galvanized steel; or with slats or similar semi-opaque, non-reflective material, to blend to the greatest feasible extent with the background soil.

The project owner shall submit for CPM and BLM review and approval, a specific Surface Treatment Plan that will satisfy these requirements. The treatment plan shall include:

- A. A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes;
- B. A list of each major project structure, building, tank, pipe, and wall; the transmission line towers and/or poles; and fencing, specifying the color(s) and finish proposed for each including galvanized steel. Colors must be identified by vendor, name, and number; or according to a universal designation system;
- C. One set of color brochures or color chips showing each proposed color and finish;
- D. A specific schedule for completion of the treatment; and
- E. A procedure to ensure proper treatment maintenance for the life of the project.

The project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated in the field, until the project owner receives notification of approval of the treatment plan by the CPM and

[BLM](#). Subsequent modifications to the treatment plan are prohibited without CPM and [BLM](#) approval.

TEMPORARY AND PERMANENT EXTERIOR LIGHTING

VIS-2 To the extent feasible and consistent with safety and security considerations, the project owner shall design and install all temporary and permanent exterior lighting so that:

- a) lighting does not cause excessive reflected glare;
- b) lighting does not illuminate the nighttime sky;
- ~~e) mounting heights and locations of all lighting fixtures, including roadway lighting, will not allow light to fall on the mirror surfaces of the SunCatchers in the stowed position, and~~
- d) illumination of the project and its immediate vicinity is minimized as to times of use and extent.
- e) Permanent night lighting shall comply with all applicable standards, practices, and regulations including, and specifically, the following Illuminating Engineering Society documents:
 - RP-33-99 Lighting for Exterior Environments
 - TM-1 0-00 Addressing Obtrusive Light (Urban Sky Glow and Light Trespass) in Conjunction with Roadway Lighting
 - TM-1 5-07 Luminaire Classification System for Outdoor Luminaires

SETBACK OF SUNCATCHERS FROM HIGHWAY I-40.

VIS-3 To reduce the visual dominance and glare effects of the [SunCatchers facility](#) to motorists on Highway I-40, the ~~Applicant~~[project owner](#) shall set back the nearest units to a minimum distance of 223 feet from the edge of the roadway.

Verification: At least 30 days prior to start of ~~construction~~[Pre-Construction Site Mobilization](#), the project owner shall present to ~~BLM's Authorized Officer~~ and the CPM a revised plan depicting how the proposed [PV modules](#) [SunCatchers](#) will be set back from the highway. If [BLM and/or](#) the CPM ~~determines~~[determine](#) that the plan requires revision, the project owner shall provide to the CPM a revised plan for review and approval by [BLM and](#) the CPM.

The project owner shall not begin construction until receiving [BLM and](#) CPM approval of the revised plan.