

## **Response to CEC Staff Data Adequacy Comments**

### **Technical Area: Visual Resources**

Following are additional information and/or clarifications in response to the specific issues raised in the CEC staff Data Adequacy review. For each specific area where the AFC was considered inadequate by CEC staff, the applicable section of the CEC Siting Regulations is identified, followed by the “Information Required to Make AFC Conform with Regulations”, followed by the supplemental/clarifying information.

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#### **VIS-1. Appendix B (g) (6) (f).**

##### **Information Required:**

Although a brief discussion on the visual effects of light and glare is discussed from the natural gas-fired generating portion of the project, there is no discussion of the effects of glare from the solar array portion of the project. Discuss the effects of the solar arrays from public viewing areas, especially from the KOP 3, which has been identified as the nearest residence.

##### **Response:**

Please note that potential for glare from the solar array to adversely affect aircraft operations at SCLA is discussed in AFC Section 6.13.3 and was found to be less than significant. Glare at KOP 3 or at other public viewing areas in the vicinity of the VV2 Project site also is expected to be less than significant, primarily because of the parabolic shape of the concentrating mirrors of the solar collector array. As described in AFC Section 2.4.3.4, the parabolic mirrors focus the sun’s rays on the heat collection element of the solar array system, which is a pipe located at the focal point of the parabola. Further, the parabolic shape would cause the rays to be reflected directly onto the side of the heat collection element facing the mirrors, the site opposite offsite viewers. Thus, the potential for glare at offsite public locations would be limited to stray reflections that were not focused on the heat collection element of the solar array.

Secondary reflections that could occur between the sun-reflecting mirror-offsite observers would be reduced to a thin line because of the mirror’s extruded parabolic shape. In contrast, with a flat collecting mirror, the reflected image would remain the same size, while with a revolved surface (e.g., a sphere or paraboloid), the image size could be reduced or enlarged depending on the concavity of the reflecting surface

Because the solar array field is oriented north-south and the mirrors rotate in an east –west direction to track the sun as it moves across the sky during the day, there would be no potential for reflection off the solar mirrors producing glare at locations to the north or the south of the Project site. Glare-producing reflections from the solar array mirrors would only be possible when the sun’s position in the sky is behind the viewer. The sun’s position in the sky is a function both of time of day and time of year. Thus, as the mirrors would be oriented to the east to track the sun in the early parts of the day, there would be no potential for glare-producing reflections in the morning at locations to the west of the Project site (e.g., KOP 3). Because KOP 3 is essentially due west of the VV2 Project site, the potential for glare at KOP 3 also would be primarily between March 21 and September 21, the time of the year when the sun is highest in the sky.

For offsite locations to the east of the Project site, there would be no potential for glare-producing reflections at public locations in the afternoon hours when the reflecting surfaces of the concentrating mirrors have been rotated to the west to capture the rays of the afternoon sun. Moreover, the mirrors themselves would have to be visible from the viewing location and the locations near the VV2 Project site to the east of the Mojave River (e.g., on or near National Trails Highway) are at a lower elevation than the Project site itself, which would render the mirrors not visible and eliminate the potential for glare at these areas.