

VISUAL RESOURCES

Testimony of Melissa Mourkas, ASLA

SUMMARY OF CONCLUSIONS

Energy Commission staff concludes that the Hidden Hills Solar Electric Generating System (HHSEGS) project would result in substantial adverse visual impacts. This impact would be significant even after employing all feasible mitigation, in large part because of the visual prominence of the two 750 foot solar power towers that are a feature of its design. Examples of these significant visual effects are provided by analysis of several Key Observation Points.

The project would also result in a significant cumulative effect when viewed in combination with existing and foreseeable future Nevada-side projects within the project viewshed. Project impacts, in combination with existing and foreseeable future solar and other development projects within the greater Pahrump Valley, including both California and Nevada, would contribute to a perceived sense of industrialization of the open, undeveloped desert landscape and impact views of scenic resources in the Pahrump Valley viewshed, having the potential to be significant and unavoidable.

Finally, the project would not be consistent with several applicable goals and policies of the Inyo County General Plan and Renewable Energy Ordinance (Title 21). The project is found to be generally consistent with Nevada's laws, ordinances, regulations, and standards (LORS) as they pertain to Visual Resources, although they are not applicable to the project in California.

If the Energy Commission approves the project, staff recommends that all of staff's proposed conditions of certification be adopted in order to minimize visual impacts to the greatest feasible extent.

INTRODUCTION

Visual resources consist of the viewable natural and built features of the environment. In this section, staff evaluates the construction and operation of the HHSEGS using the "Aesthetics" criteria in the California Environmental Quality Act (CEQA) Guidelines to determine if the project would cause significant impact on the environment. In addition, staff assesses the extent to which the project would comply with applicable federal, state, and local LORS pertaining to aesthetics and preservation and protection of sensitive visual resources.

To provide a consistent framework for this analysis, a standard visual assessment methodology developed by the California Energy Commission staff and applied to numerous siting cases in the past was employed in this study. A description of this methodology is provided in **Appendix VR-1**.

REGIONAL SETTING

The project site would be located in the unincorporated community of Charleston View, within the Pahrump Valley, which extends across the California-Nevada state line. The

valley is well-defined by the mountain ranges which form a nearly continuous circumference. The proposed site is located adjacent to Old Spanish Trail Highway, also known locally and on some maps as Tecopa Road¹, approximately 10 miles east of Nevada State Highway 160, which bisects the valley in a northwesterly-southeasterly trajectory. The landscape is generally characterized by rugged mountain ranges with broad alluvial fans leading to the valley floor. The city of Pahrump, Nevada, is located to the northwest of the project site, with the city center (the intersection of Nevada State Highways 160 and 372) being approximately 8 miles as the crow flies from the center of the project site. Pahrump is not a densely developed city, but instead has a rural development pattern of residential areas interspersed with small commercial and agricultural uses. The city has an underlying rectangular grid of streets, some of which are incomplete or not through streets. There is no direct-access paved road to the project site from Pahrump. There are dirt roads that criss-cross the valley floor, so it possible to reach Charleston View from Pahrump via four-wheel drive vehicle.

Nearby designated recreation areas include the Nopah Wilderness Area and Pahrump Valley Wilderness Areas in California and the Spring Mountains Recreation Area, including Mt. Charleston, in Nevada (see **Visual Resources Figure 1-Project Vicinity Map**). Wilderness Areas are designated by legislation under the 1964 Wilderness Act².

The Bureau of Land Management (BLM) describes Wilderness Areas as places of solitude where people may experience freedom from our fast-paced industrialized society. Motorized vehicle use is prohibited in Wilderness Areas, except within designated roadways. Recreation opportunities generally include hiking, camping, rockhounding, fishing and hunting.

The Nopah Range Wilderness Area encompasses 106,623 acres to the west of the project site. It incorporates the Resting Spring Range on the western side and the Nopah Range on the eastern side, as well as the Chicago Valley, which divides the two ranges. Nopah Peak rises to 6,395 feet in elevation and is visible from the greater Pahrump Valley. The area is comprised of alluvial fans, badlands, playa, plains, river washes and hills. The portion of the wilderness facing the project site can be characterized as rugged mountains which give way to broad alluvial fans, upon which is found creosote bushes, yucca and other Mojave Desert shrub species.

Pahrump Valley Wilderness encompasses 73,726 acres, and is located south of the proposed project site. Its three valleys, California, Pahrump and Mesquite, are comprised of alluvial slopes rising southward into the Kingston Range, which is partially located within the Wilderness Area. The highest peak is 4,569 feet in elevation. Vegetation includes species typical of the Mojave Desert at this elevation plus a few unique plants which thrive in the limestone soils of the area. The Pahrump Valley Wilderness Area landscape can be characterized as rugged and changeable. Like the Nopah Range, the pronounced alluvial fans are fairly densely vegetated in contrast to the less-vegetated, rugged mountainsides.

¹ This section will use Old Spanish Trail Highway in lieu of Tecopa Road.

² The Wilderness Act, Public Law 88-577 (16 U.S. C. 1131-1136), 88th Congress, Second Session, September 3, 1964

The Mount Charleston Wilderness and the Spring Mountains National Recreation Area are located east of the proposed project site in Nevada, within the Humboldt-Toiyabe National Forest. The Spring Mountains get their name from the many natural springs in the area. The higher elevations of the range provide an alpine respite from the heat of the valley floor. Charleston Peak, at 11,918 feet in elevation, is a prominent feature of the range and dominates the overall landscape of the Pahrump Valley. The recreation area spans 316,000 acres and offers numerous hiking trails, including along the spine of the mountains. Access to the trails and the recreation areas are from Highway 95 in Nevada, on the eastern side of the range. Access from the Pahrump Valley appears limited.

Pahrump Valley is also home to segments of the Old Spanish National Historic Trail (OST). OST was designated as a National Historic Trail when Congress passed Senate Bill No. 1946 and was signed into law in December, 2002. The trail segments in California as recorded by the National Park Service (NPS) may be seen in Visual Resources Figure 2. For the purposes of this analysis, the current NPS alignments provided to Energy Commission cartography staff will be used as the primary routes for the OST. However, there are differences of opinion as to the correct alignment of the OST routes, whether it is the current NPS routes, routes shown in the Final Feasibility Study (2001)³, routes shown on DeLorme maps, routes identified by members of the Old Spanish Trail Association (OSTA) or the route used by the applicant in the AFC. OSTA provided Energy Commission staff with independently-surveyed traces of the trail after becoming interveners in the process. This resource is discussed in more detail in the **Cultural Resources** section of this Final Staff Assessment (FSA).

Visual Resources Figure 1 shows the relationship between the proposed project site and the wilderness and recreation areas described above and the national historic trail in the area. Figure 1 clearly shows the “bowl” whose bottom is the project site and whose sides are made up of areas of high scenic quality. It is this high-quality scenic landscape which is the backdrop for the proposed industrial-scale development of HHSEGS.

The proposed project site is privately-owned land located in an area where most of the land is publicly-owned or managed by the Bureau of Land Management (BLM). The BLM lands surrounding the project site have been inventoried by the respective California and Nevada BLM field offices and both Visual Resource Inventory (VRI) and Visual Resource Management (VRM) classes have been applied. The system BLM uses classifies BLM-owned or managed land into one of four visual inventory classes. From the inventory data, the Resource Management Plan (RMP) process then assigns a VRM class to the inventoried areas. The VRM class reflects the way the visual landscape will be managed and the amount of visual change that will be permitted to take place within that landscape area.

VRI classes are assigned by evaluating Visual Sensitivity, Scenic Quality and Distance Zone. Examples of high visual sensitivity would include areas within scenic byways, national monuments, wilderness areas or major transportation corridors. Scenic quality

³ Old Spanish Trail National Historic Trail Feasibility Study and Environmental Assessment July 2001, <http://parkplanning.nps.gov/document.cfm?parkID=454&projectID=12591&documentID=38207>

is established by rating the following landscape features: land forms, vegetation, water, color, adjacent scenery, scarcity and cultural modifications from Key Observation Points (KOPs) within a defined viewshed. The overall score determines the scenic quality. Distance is the third component used to establish a VRI rating by using foreground, middle ground, background or seldom seen to describe the part of the viewshed that is most critical.

From the VRI ratings, VRM takes into account the management of the resource as a whole and policy decisions regarding land management. VRM classes do not necessarily reflect the VRI classes that were established for the particular area. There are four VRM classes:

- Class I: the objective is to preserve the existing character of the landscape and the level of change allowed should be very low. Wilderness Areas are automatically placed into Class I;
- Class II: the objective is to retain the existing character of the landscape and level of change to the landscape must be low;
- Class III: the objective is to partially retain the existing character of the landscape and the level of change can be moderate;
- Class IV: the objective is to provide for activities that require major modification of the landscape and the degree of change can be high.

Visual Resources Figure 3 shows the Visual Resource Inventory Classes for the BLM lands in the vicinity of the project area. Nearly 50 percent of the land shown in Figure 3 is Class I, areas of the highest scenic quality and viewer sensitivity. These Class I areas extend beyond the boundaries of the wilderness areas. The Class II areas are seen in both mountains and valleys adjacent to Class I areas and on the Pahrump Valley floor. Class III areas appear to be the smallest component of the areas shown in the figure. Class IV are found mostly in the Pahrump Valley. The figure demonstrates that, according to the BLM rating system, there is a generally a high degree of scenic quality in the vicinity of the project site.

Visual Resources Figure 4 shows the VRM classes assigned to the area in the most recent RMP. Note the significant migration of Class I areas to Class II, III and IV, and the significant downgrade of the valley floor and alluvial fans to Class III and IV. The only remaining Class I designations are the Nopah and Pahrump Valley Wilderness Areas. The two figures clearly illustrate the high degree of scenic quality that exists with the viewshed of the proposed project site.

Other sources have characterized the scenic qualities of the Pahrump Valley and the project location. The Environmental Impact Report prepared for Roland Wiley in 1974 for the subdivision of Parcels 86 and 87 describes the aesthetic character of the area to be subdivided, now portions of the project site. "With over 90 basins and 160 mountain ranges and spurs, the regional topography offers much in the way of visual enjoyment ". The report goes on to describe "marbled mountain formations" and concludes "the region has a high aesthetic value, one not measured solely in currency" (EDB 1974, p. 41). The report states that "the present aesthetic aspects of the site are predominantly visual, i.e., a desert valley with surrounding ranges of mountains", although the report

described the “desert flora and lightly timbered mountains” as providing little in the way of visual diversity (EDB 1974, p. 68).

Landscape character photographs of the regional setting can be found in **Visual Resources Figures 5-16**. Located immediately to the south of the project site and Old Spanish Trail Highway is the community of Charleston View. The 1960s residential subdivision’s unpaved streets are in a very recognizable grid and the lots are predominantly 2.5 acres in size. 2010 U.S. Census data⁴ indicates there are 68 residents living within 6 miles of the project site in California. While the residences are scattered throughout the subdivision, many are located within the area bounded by Silver Street on the west, an unnamed street two blocks to the east, and Charity Lane to the south. The residences include single-family homes and other structures such as trailers and outbuildings. In addition to permanent residents, Inyo County’s Director of Health and Human Services indicates there exist a number of squatters on various lots throughout Charleston View⁵.

PROJECT SITE

The project site would encompass approximately 3,277 acres (5.12 square miles) of privately owned land in the community of Charleston View, Inyo County, California. The site is immediately adjacent to the border with Nevada; the border forms the eastern boundary of much of the project site. The land was subdivided in the 1960s and features a grid of dirt roads approximately one-half mile apart. The roadways have been maintained and continue to experience vehicular travel. The grid of dirt roads also extends into the residential area south of the project site. Other than a storage area for boats and trailers located just beyond the eastern boundary of the project site, the remnants of an old orchard and the roads created in the 1960s, much of the project site is undisturbed. It is a landscape of typical Mojave Desert Scrub and shadscale scrub⁶ plant species, a generally flat to mildly sloping terrain, gravelly sandy soil⁷ and is criss-crossed by washes and minor depressions and rises.

Visual Resources Table 1 provides the proposed project’s approximate dimensions, colors, materials, and finishes for major buildings and structures.

VISUAL RESOURCES Table 1
Proposed HHSEGS Project’s Dimensions, Colors, Materials and Finishes
Of Major Buildings and Structures

Element	Height (ft)	Length (ft)	Width (ft)	Diameter (ft)	Color	Materials	Finish
Power Tower	590			72	Natural	Concrete	Natural

⁴ Source: U.S. Census Bureau, 2010 Census

⁵ Inyo County, Health and Human Services Department, Jean Turner, Director, letter dated December 12, 2011, received by CEC as attachment to **INYO 2012b – Inyo County/K. Carunchio (tn: 63719)** Inyo County Letter from Inyo County regarding Preliminary Estimates for the Fiscal Impacts of the Construction and Operation. 02/16/2012.

⁶ 11-AFC-02, Figure 5.2-3 Vegetation Map.

⁷ 11-AFC-02, Figure 5.11-1, Soil within 1 mile of HHSEGS.

							Concrete Finish
Solar Receiver Steam Generator (SMSG)	160			102	Black or Brightly Glowing	Metal	Flat
Switchyard (off site)	36	420	310		Gray & Silver	Metal	Flat
Steam Turbine Generator Enclosure	45	110	46		Metal	Metal	Flat
Aux. Boiler	25	78	68		Not Specified	Painted	Not Specified
Element	Height (ft)	Length (ft)	Width (ft)	Diameter (ft)	Color	Materials	Finish
Aux. Boiler Stack	135			5.5	Not Specified	Painted	Flat
Night Preservation Boiler	14	25	15		Not Specified	Painted	Not Specified
Night Preservation Boiler Stack	30			1.5	Not Specified	Not Specified	Not Specified
Fin Fan Dry Coolers	13.5	80	60		Rusted Finish	Metal	Flat
Air-cooled Condenser (ACC)	120	310	218		Not Specified	Metal	Flat
Emergency Generator (Power Block)	10	30	9		Not Specified	Metal	Flat
Emergency Generator (Common Area)	7	15	6		Not Specified	Painted	Not Specified
Generator Step Up Transformer	25	40	58		Gray	Metal	Flat
Unit Auxiliary Transformer	14	24	25		Gray	Metal	Flat
Service/Fire Water Storage Tank	32		1	34	Not Specified	Metal	Flat
Treated Water Storage Tank	32			34	Not Specified	Metal	Flat

Potable Water Storage Tank	9			6	Not Specified	Not Specified	Flat
Potable Water Treatment System Feed Tank	Not Specified	Not Specified	Not Specified	Not Specified	Not Specified	Not Specified	Not Specified
Demineralized Water Storage Tank	32			30	Not Specified	Metal	Flat
Element	Height (ft)	Length (ft)	Width (ft)	Diameter (ft)	Color	Materials	Finish
Waste Water Collection Tank	25			14	Not Specified	Metal	Flat
Mirror Wash Water Storage Tank	16			23	Not Specified	Metal	Flat
Heliostats	14.5' Max	17.16'	Not Specified		White (back of unit)	Galvanized (steel parts)	Semi-Matte (back of unit)
Admin/Control/Warehouse Building	14-22	325	85		Not Specified	Metal	Flat
Deaerator/Feed Water Heaters	130	162	43		Not Specified	Metal	Flat
Mirror Wash Covered Parking	20	300	55		Not Specified	Metal	Flat
Plant Services Building	15	88	40		Not Specified	Metal	Flat
Plant Electrical Building	30	132	38		Not Specified	Metal	Flat
Water Treatment Building	30	150	85		Not Specified	Metal	Flat

Source: 11-AFC-02, Supplemental DR Set 2, Table 5.13-4R1, DR Set 2C, Figure DR 152-1.

Transmission Line(s)

The interconnecting transmission lines are proposed to be located in Nevada, leaving the HHSEGS facility at the state line, connecting to the project switchyard in Nevada and proceeding in a corridor parallel to Old Spanish Trail Highway toward Nevada Highway 160. The transmission corridor in Nevada is within BLM's permitting jurisdiction, and the impacts of the project's offsite transmission lines will be assessed through the National Environmental Policy Act (NEPA), process by BLM in its Environmental Impact Statement (EIS) for the transmission lines. The on-site underground transmission lines originate at Solar Plants 1 and 2, and extend under the heliostat arrays to the substation located in the common area.

The Nevada transmission corridor is shown in Figure TSE-2 in the Application for Certification (AFC), which depicts "typical" Double-Circuit Monopole 230kV pole

structure, ranging in height from 90 feet to 120 feet. The transmission poles are listed in Table 5.13-4 as one-hundred feet in height, and the proposed color and materials are rusted metal. KOP-1 in Nevada includes a portion of a pole in the view of the KOP.

Natural Gas Pipeline

The natural gas pipeline would be underground and not visible on the project site. A 12-inch diameter pipeline is anticipated, and would enter the HHSEGS site in the common area where it would connect with an onsite gas metering station. It would exit the project site at the state border, and continue parallel to Old Spanish Trail Highway in Nevada. The portion of the underground gas line that is onsite is shown in Data Response Set 1A, Revised Figure DR34-1. No visible components of the onsite gas line are anticipated.

Water Supply and Discharge

Water for facility use would be pumped from several (up to six) onsite wells. Groundwater would be treated and stored on site in a storage tank at each power block noted on Figure 2.2-1-R1 (Supplemental Data Response Set 2, April 2, 2012). The tanks would be located within the cluster of facilities of each solar power plant at the base of the power tower. The largest of the storage tanks would be 32 feet in height and 34 feet in diameter.

Construction Laydown and Staging Area

The temporary construction laydown area would be an approximately 180-acre area roughly bounded by Quartz Street on the east, Avenue B on the north, Avenue D on the south and extending west of the project site approximately one-quarter mile. The southern edge of construction laydown area as defined would be approximately one mile north of Old Spanish Trail Highway at Avenue D and extend one mile north to Avenue B. The AFC indicates that construction traffic would enter through the main HHSEGS entry drive, however, a later figure, Access Roads and Paved Internal Roadways (AFC, Traffic and Transportation Figure 2), shows construction traffic entering at what is now Topaz Street, on the western project boundary. The laydown area would be used for parking, storage of construction materials and some construction assembly activities.

APPLICANT PROPOSED MITIGATION MEASURES AND CONDITIONS OF CERTIFICATION

The applicant's discussion of the impacts of the HHSEGS is found in Section 5.13.6, pages 5.13-32 to 33 in the AFC. The applicant concludes that HHSEGS includes features that reduce visual impacts to less than significant, with mitigation, from the construction and operation of the facility. The applicant proposes the following visual resources mitigation measures to reduce visual impacts to less-than-significant levels:

1. Ground disturbance and soil erosion will be minimized by avoiding steep slopes and by minimizing the amount of construction and ground clearing needed for roads and staging areas. Dust suppression techniques will be employed to minimize impacts of vehicular and pedestrian traffic, construction and wind on exposed surfaces.

2. A lighting plan that minimizes the project's nighttime light impacts will be developed and submitted to Energy Commission staff for review. Provisions contained in this plan will include installation of nighttime lighting only in areas where it is required for operations or safety, use of the lowest levels of lighting consistent with operational needs and safety regulations, use of light fixtures that are hooded to direct light only to the areas where it is needed and to prevent light from spilling off the site or up into the sky, and use of switches and motion detectors to assure that lighting is turned on only when required.
2. A color treatment plan to blend the project facilities into the existing setting will be developed in consultation with Inyo County and Energy Commission staff.
3. A landscape plan will be developed for the project setback area along Old Spanish Trail Highway. In the portion of the setback area directly north of Charleston View residential area, this plan will include the use of a mix of tall growing trees to provide partial screening of the views toward the solar power towers from the residential area, and lower growing shrubs to screen views into the site from Old Spanish Trail Highway. The plant species selected for this area will emphasize species with low water needs that are aesthetically compatible with the landscape setting. In the remainder of the setback area along Old Spanish Trail Highway, the emphasis will be on use of native shrubs with low water requirements that are planted in an informal, naturalistic pattern to provide partial screening of views into the project site. The landscape plan will be submitted to Inyo County and Energy Commission staff for review.
5. To reduce and compensate for the changes to the views toward the project site seen from Charleston View (KOP 4), two measures will be implemented:
 - a. The applicant will make provisions for a one-time program to plant trees on the properties of any Charleston View residents who indicate an interest in having them. The intent is to plant the trees in locations that will screen views looking toward the solar power towers from the residences on the property and from the property's primary outdoor living areas. The applicant's professional arborist will identify a set of species that are well adapted to the local conditions and which have characteristics that provide effective screening of views. The applicant's arborist will work with residents to select up to eight trees from this set of species and will assist the residents in identifying appropriate locations for their installation. The applicant will take responsibility for purchasing and installing the trees, which will be up to ten gallons in size. Once installed, irrigation and maintenance of the trees will be the responsibility of the property owner.
 - b. To compensate for the visual clutter the solar power towers will add to a portion of the view from Charleston View, the applicant will assist with a one-time clean-up program within the Charleston View rural residential subdivision. This clean-up program will entail the applicant making provisions to assist property owners with clean-up of their properties by providing free hauling and disposal of unwanted debris and vehicles.

The applicant discusses applicable laws, ordinances, regulations and standards (LORS) in Section 5.13.2 of the AFC. On page 5.13-3 to 4, the applicant discusses the project's compliance with state and local laws. The applicant concludes the proposed project would be in conformance with state scenic highway regulations and local Inyo County General Plan provisions and ordinances. Staff notes that the Renewable Energy Overlay Zone General Plan Amendment of April, 2011, was revoked by the County Supervisors in September of 2011. This was after publication of the AFC. The General Plan Designation for the project site has since returned to Open Space and Recreation. Industrial development such as the HHSEGS facility is not permitted in Open Space and Recreation designations and the assumptions made in the AFC as to conformance with the Overlay Zone are no longer applicable. Please see the **Land Use** section of this **FSA** for more discussions on land use zoning. Staff provides a full summary of conformance with LORS in **Visual Resources Table 6**.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Staff evaluates the project to determine compliance with federal, state and local laws, ordinances, regulations and standards. Federal and state laws reviewed generally fall under scenic by-way and highway designations. No National Scenic By-Ways or State Scenic Highways are located within the project vicinity; therefore there is no discussion of these laws in this section.

California Government Code, section 65300, requires each city and county in California to adopt a general plan for the physical development of the county or city and any land outside its boundaries that bears relation to its planning. On the basis of these general plans, cities and counties establish policies and strategies necessary to carry out elements of the plan.

The Inyo County General Plan, adopted in 2001, sets forth the Goals and Policies that provide direction for the adoption of regulations, ordinances and codes. **Visual Resources Table 2** lists the local laws, ordinances, regulations, and standards (LORS) as they pertain to the HHSEGS.

Visual Resources Table 2 includes information about relevant local laws, ordinances, regulations, and standards (LORS) pertaining to aesthetics or the preservation and protection of sensitive visual resources.

VISUAL RESOURCES Table 2
Applicable Laws, Ordinances, Regulations, and Standards

Source	Policy and Strategy Description
STATE	
State of California AB 1881 (2006), Water Efficient Landscape Ordinance (WELO).	Local agencies were required to adopt a WELO based on the state model by January 31, 2010, or the state's model ordinance would be applicable within the jurisdiction of the local agency. Inyo County has not adopted its own ordinance; therefore the state model ordinance applies.
LOCAL	
Inyo County, California	

Source	Policy and Strategy Description
Inyo County General Plan, Goals and Policies Report, December, 2001. Public Services and Utilities, Policy PSU-1.7: Undergrounding Utilities.	The County shall require undergrounding of utility lines in new development areas...except where infeasible for operational or financial reasons. Additional implementation measures are found in Table 4-4, page 4-44.
Inyo County General Plan, Goals and Policies Report, December, 2001. Public Services and Utilities, Policy PSU-3.1: Efficient Water Use.	The County shall promote efficient water use by encouraging and enforcing water-conserving landscaping and other measures.
Inyo County General Plan, Goals and Policies Report, December, 2001. Gas and Electrical Facilities, Policy PSU-10.1: Expansion of Services	The County shall work with local electric utility companies to design and locate appropriate expansion of electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual and other impacts on existing and future residents.
Inyo County General Plan, Goals and Policies Report, December, 2001.7.3, Scenic Highways, Policy SH-1.1: Protect the Natural Qualities of Designated Scenic Routes.	The natural qualities of designated scenic routes should be protected. Definitions of scenic routes may be found in Section 7.3.1, page 7-11.
Inyo County General Plan, Goals and Policies Report, December, 2001. 7.8 Canals, Pipelines and Transmission Cables. Policy CPT-1.1: Placement of Corridors.	The County shall consider the visual and environmental impacts associated with placement of regional conveyance corridors. Table 7-7, page 7-33, lists implementation measures.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, 8.8.3: Visual Resource Issues.	Critical visual resource issues identified: <ul style="list-style-type: none"> • Maintain small town character; • Preserve panoramic views; • Maintain open natural character of the County; Maintain visual resources of scenic corridors, highways and roadways.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources. Goal VIS-1.	<ul style="list-style-type: none"> • Preserve and protect resources throughout the County that contribute to a unique visual experience for visitors and quality of life for County residents. This includes a number of policies (not listed here) to protect historic character, encourage community design themes, establish grading standards and ensure outdoor advertising does not degrade visual resources.

Source	Policy and Strategy Description
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources. Goal VIS-1.1: Historic Character.	The County shall preserve and maintain the historic character of communities within the County.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, Policy VIS-1.4: Equipment Screening.	Within communities, building equipment shall be screened from public view.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, Policy VIS-1.6: Control of Light and Glare.	The County shall require that all outdoor light fixtures use low-energy, shielded light fixtures which direct light downward.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, Policy VIS-1.7: Street Lighting.	Street lighting shall only be utilized where needed to protect public safety related to traffic movement.
Inyo County Renewable Energy Ordinance, August 17, 2010.	<ul style="list-style-type: none"> • Potential adverse impacts may include scenic views which may be blocked or degraded, which may affect the attractiveness of the County for tourism. Other impacts may include light and glare. The County requires that adverse impacts are avoided or acceptably mitigated. • Police powers of the County include protection of the environment of Inyo County, including biological and other natural resources, aesthetics, recreational attractiveness. • The term “environment” includes the ecological, social, aesthetic and economic environment of the County. It is not limited by and may be broader than the environmental considerations under CEQA or NEPA [National Environmental Policy Act]. <p>In lieu of imposing development standards set forth in Title 18 (above), the County may impose such standards as are deemed appropriate and may incorporate or impose such other standards and mitigation measures as are deemed necessary.</p>
Clark County, Nevada	

Source	Policy and Strategy Description
Northwest Clark County Land Use Plan, November 7, 2007: Wilderness Areas	Three Wilderness Areas and one Wilderness Study Area are located in Northwest Clark County. These include Mt. Charleston, La Madre Mountain and Rainbow Mountain Wilderness Areas and the Mount Stirling Wilderness Study Area. Mount Charleston and Mount Stirling are within the viewshed of the project area.
Northwest Clark County Land Use Plan, November 7, 2007: Scenic Byways	Northwest Clark County has two county-designated Scenic Highways, a BLM Back Country Route and four state-designated Scenic Byways. No designated scenic highways, byways or back country routes are in the vicinity of the proposed project site.
Clark County Chapter 30.56: Site Development Standards, Part F: Lighting Standards	Provides lighting standards that restricts height of poles to 25 feet and that all outdoor freestanding luminaries shall be hooded and directed downward. Security lighting on sensors are exempt from the standards.
Clark County Chapter 30.68.30: Site Environmental Standards: Lighting	Lighting shall be designed to prevent light from shining directly on residential uses. All light sources shall be shielded and directed downward at all times.
Clark County Comprehensive Plan, November 16, 2010, Volume One, Environmentally Sensitive Lands (ESL) Policy and ESL Advisory Committee Report, January 29, 2004.	Aesthetic Areas are defined in the 2004 ESL Report These areas include Scenic Routes, Slopes of 50% or more, Significant Geologic Features and Scenic Points or Features identified in Table one of the report. There are slopes of more 50%, significant geologic features and scenic points potentially within the viewshed of the proposed project site. The policies outlined in the Comprehensive Plan generally pertain to land use and not aesthetics.
Nye County, Nevada	
Nye County Comprehensive/Master Plan, June 7, 2011, Section 3.5.1, Solar Energy, Figures 7 and 8.	Figure 7 shows pending and approved renewable energy projects. Figure 8 shows those areas of the county best suited to solar development based upon a March 2010 analysis. ⁸ The greater Pahrump

⁸ Suitability Analysis for Nye County Solar Generation, Transmission and Related Support Facilities, March 2010.

Source	Policy and Strategy Description
	Valley is shown as “Better” for solar development, on a scale Best- Better-Good-Unsuitable. An area adjacent to Highway 160 is identified as best. This is presumably the same area identified in Figure 7 as “pending solar project”. This appears to be in the vicinity of the possible solar project listed in Visual Resources Table 5 Cumulative Impacts as Sandy Valley in Clark County.
Nye County Comprehensive/Master Plan, June 7, 2011, 6.1.7: Scenic Drives	Three scenic roads are identified on page 53: Lunar Crater Back Country Byway, The Extraterrestrial Highway and Tonopah Star Trails. None of the roads are in the proposed project vicinity.

ASSESSMENTS OF IMPACTS AND DISCUSSION OF MITIGATION

This section includes information about the following:

1. Method and threshold for determining significance
2. Direct/indirect/induced impacts and mitigation
3. Cumulative impacts and mitigation

METHOD AND THRESHOLD FOR DETERMINING SIGNIFICANCE

To determine whether there is a potentially significant visual resources impact generated by a project, Energy Commission staff reviews the project using the 2011 CEQA Guidelines, Appendix G Environmental Checklist, pertaining to “Aesthetics.” The checklist questions include the following:

- A. Would the project have a substantial adverse effect on a scenic vista?
- B. Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?
- C. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?
- D. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Staff evaluates both the existing visible physical environmental setting, and the anticipated visual change introduced by the proposed project to the view, from representative, fixed vantage points known as “Key Observation Points” (KOPs). KOPs are selected to be representative of the most characteristic and critical viewing groups and locations from which the project would be seen. The likelihood of a visual impact

exceeding Criterion C of the CEQA Guidelines, above, is determined in this analysis by two fundamental factors: the susceptibility of the setting to impact as a result of its existing characteristics (reflected in its current level of visual quality, the potential visibility of the project, and the sensitivity to scenic values of its viewers); and the degree of visual change anticipated as a result of the project. These two factors are summarized respectively as *visual sensitivity* (of the setting), and *visual change* (due to the project). Briefly, KOPs with high sensitivity (Environmental Checklist pertaining to “Aesthetics”, takes into account scenic quality, high levels of viewer concern, etc.), that experience high levels of visual change from a project, are more likely to experience adverse impacts. KOPs with low sensitivity or low levels of visual change are less likely to experience adverse impacts. **Visual Resources Appendix VR-1** provides information about the process used to evaluate each KOP. Staff’s analysis of the project’s effect on each KOP is presented under Operation Impacts and Mitigation section of this analysis.

Visual Resources Figure 17 shows the locations of the seven KOPs provided by the applicant in the AFC. The four KOPs located in California used in this analysis are as follows:

- **KOP 3** – View from Old Spanish Trail Highway and Property Boundary of Proposed St. Therese Mission, Charleston View, California
- **KOP 4** – View from Silver Street at Charity Lane, Charleston View, California
- **KOP 5** – View from Old Spanish Trail Highway Eastbound, Inyo County, California
- **KOP 7** – View from Garnett Road at Old Spanish National Historic Trail Alignment/4WD Road, Charleston View, California

The following three KOPs are located in Nevada, looking toward the project site:

- **KOP 1** – View from Old Spanish Trail Highway Westbound, Nevada
- **KOP 2** – View from Stump Springs ACEC, Nevada
- **KOP 6** – View from Thorne Drive at Homestead Road, Pahrump, Nevada

The KOPs were selected to represent the overall project viewshed or area of potential visual effect (the area within which the project could potentially be seen). Staff also reviews applicable federal, state, and local LORS and their policies or guidelines for aesthetics or preservation and protection of sensitive visual resources that may be applicable to the project site and surrounding area. These LORS include local government land use planning documents (e.g., General Plan, zoning ordinance). See **Visual Resources Table 2** for applicable LORS and **Table 6** for the project’s consistency with applicable LORS.

Direct/Indirect Impacts and Mitigation

Information about direct and indirect impacts and proposed mitigation is included in this section and grouped according to the questions found in the CEQA Environmental Checklist, A through D below.

A. SCENIC VISTA

“Would the project have a substantial adverse effect on a scenic vista?”

For the purposes of this analysis, a *scenic vista* is defined as a distant view of high pictorial quality perceived through and along a corridor or opening, or from a designated scenic area. Staff has conducted site visits to the project area and researched national, state and local scenic vista designations in the vicinity of the project area.

Yes. As seen in **Visual Resources Figures 1 and 3**, the project is surrounded by identified areas of high scenic value. Views of the Nopah Range and Wilderness Area, Kingston Range and Pahrump Valley Wilderness Area and Spring Mountains National Recreation Area, including the prominent Mt. Charleston, would all be significantly impacted by the project. An earlier environmental document prepared for Roland H. Wiley, concluded that the previously proposed agricultural development of “dispersed farm buildings and housing units will probably not interfere with the view of the surrounding mountains as would a high-rise development or an industrial complex with smoke stacks and other structures which ordinarily protrude above buildings (EDB 1974, p. 68). As described earlier in this section, these areas were inventoried by the BLM as Classification 1, the highest scenic value that can be assigned. Views from some of these scenic resources would also be significantly impacted, as would views from some alignments of the Mormon and Old Spanish National Historic Trails.

KOPs 5 and 7 clearly show the impact of the project on the existing scenic view of Mt. Charleston, a prominent landmark of importance in pre-history and current times. KOP 5, while located just beyond the boundary of the Nopah Wilderness Area, is representative of the view from the Nopah Wilderness Area as Old Spanish Trail Highway passes through the same alluvial foothills as the mountain range. KOP 7, located just outside the boundary of the Pahrump Valley Wilderness Area, representative of a portion of the Mormon/Old Spanish National Historic Trail, illustrates the project’s visual disturbance of the view of Mt. Charleston from the historic trail alignment and from the wilderness area.

KOP 3 manifests the adverse impact of the project on the motorists’ view of the highly scenic Nopah Range and Wilderness Area. There is no physical mitigation that can be offered to reduce the substantial adverse effect on the high pictorial quality in this valley by the introduction of two 750-foot power towers and related facilities into the landscape in both California and Nevada.

B. SCENIC RESOURCES

“Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway corridor?” For the purpose of this analysis, *scenic resources* include a unique water feature (waterfall, transitional water, part of a stream or river, estuary); a unique physical

geological terrain feature (rock masses, outcroppings, layers or spires); a tree having a unique/historical importance to a community (a tree linked to a famous event or person, an ancient, old growth tree); historic building; or other scenically important physical features, particularly if located within a designated federal scenic byway or state scenic corridor. Staff has conducted site visits to the project area and researched national, state and local scenic resource designations in the vicinity of the project area.

No. The valley floor in the project area consists primarily of desert scrub vegetation and a sandy or gravelly soil. The project site is not located within an eligible state scenic highway corridor and there are no notable scenic features or historic structures located within the site. Therefore, the project would not substantially damage scenic resources such as trees, rock outcroppings, or historic buildings within a state scenic highway.

C. VISUAL CHARACTER OR QUALITY

“Would the project substantially degrade the existing visual character or quality of the site and its surroundings?” **Yes**, as described below.

The visual aspects evaluated according to this criterion are organized into two categories: 1) construction impacts and 2) operational impacts.

Construction Impacts and Mitigation

Information about construction impacts are organized according to project site and construction laydown and parking area and linear routes. Per the AFC, construction would take place over 29 months.

Project Site and Construction Laydown Area

Construction activities at the project site and construction laydown area would substantially degrade the visual character or quality of the site and surrounding areas as viewed from KOPs 3, 4, 5 and 7, due in large part to the construction of the power towers. The construction activity, other than the power towers, would be moderately to highly visible from KOP 3, representative of the motorists travelling westbound on Old Spanish Trail Highway. Construction activities, including movement of large vehicles and materials and installation of heliostats, would occur along the entire two-mile linear project boundary fronting the road and would be at least partially visible from multiple vantage points. Construction-related truck traffic would be entering and leaving the project by way of what is now known as Topaz Street, at the westernmost boundary of the project site, and would introduce activity into the views not currently seen. The laydown area, where much of the storage and assembly would occur, is approximately one mile north of Old Spanish Trail Highway, and therefore would have low visibility from KOP 3 and the road. The construction of the power towers would be highly visible from all vantage points and therefore produce the most significant visual impact of the project. Construction views of the project structures, other than the power towers, from KOPs 4 and 7, would be diminished by the distance and screening provided by existing vegetation and topography. The project view from KOP 5 would be seen in its entirety on the valley floor and would be significantly altered by the construction activity.

Light or Glare

Nighttime construction and security lighting would have the potential to produce glare or off-site light trespass. If bright exterior lights were not shielded or directed onsite, they could introduce significant light or glare to the vicinity, particularly for motorists on Old Spanish Trail Highway, as represented by KOP 3 and 5. This has the potential to cause distraction in the form of glare and confusion as to the light source origin for motorists, who are used to travelling along a fairly dark stretch of highway. Depending upon the project setbacks, without screening and lighting controls, the impact upon motorists on Old Spanish Trail Highway would be adverse and significant. As the power towers are constructed, aviation safety lighting would need to be operational as the towers reach each successive level of lighting required by the FAA. In addition, cranes used in the project construction would also require aviation safety lighting.

The construction lighting and activity have the potential to create significant and unavoidable visual impacts on residents, motorists and other viewers. The applicant's proposed mitigation measures do not address nighttime construction lighting (5.13-32), but does describe that assembly of the heliostats would occur within a building and therefore this activity would not be visible. Impacts from nighttime construction lighting may be partially mitigated through effective implementation of Conditions of Certification **VIS-4** and **VIS-5**, screening fencing and lighting controls. Conditions of Certification **VIS-4** and **VIS-5** would also limit visibility of the construction site and the potential for glare and light trespass during construction for the lower profile construction activities. There is no mitigation for reducing the visual lighting impacts during construction of the solar tower facilities and FAA required lighting of the power towers, therefore these visual effects would remain significant and unavoidable.

Linears

Gas pipeline construction would occur primarily in Nevada on BLM-managed lands. Due to their temporary nature and low visibility, there would be no significant adverse impacts from construction of the pipelines.

On-site construction would include underground transmission facilities. There would be temporary visual impacts of staged construction materials, equipment and excavation. With effective implementation of **VIS-4** and **VIS-5**, onsite linear construction would be largely screened from view for viewers at close proximity, such as KOP 3. Staff anticipates that no significant adverse visual impacts would occur during construction of the linears associated with the project in California. BLM is addressing the impacts of linear construction in Nevada.

CONCLUSION

Overall, staff concludes that the project's proposed construction activities as described above would substantially degrade the existing visual character or quality of the site and its surroundings. The adoption of the conditions of certification noted herein would mitigate some of the visual impacts at ground level but there is no mitigation for the visual impacts during construction of the power towers.

Staff has reviewed **Socioeconomics Figure 1** showing the minority population is less than 50 percent within a six-mile radius of the proposed HHSEGS. The absence of an

environmental justice population within that radius and, by extension, the lack of visual impacts to any environmental justice population leads Energy Commission staff to the conclusion that there are no visual resources environmental justice issues related to the construction of this project and no minority or low-income populations would be significantly or adversely impacted.

Operational Impacts and Mitigation

Operation impacts are discussed by representative Key Observation Points (KOPs) followed by a summary of impacts from Linears and Water Vapor Plumes. As discussed earlier, seven KOPs were identified within the AFC and all are analyzed for CEQA purposes. Potential impacts are identified by two fundamental factors for each KOP: *visual sensitivity* (the susceptibility of the setting to impact as a result of its existing characteristics, including current level of visual quality, potential visibility of the project, and sensitivity to scenic values of viewers); and the degree of *visual change* anticipated as a result of the project.

KEY OBSERVATION POINTS IN CALIFORNIA

KOP 3 (Figure 20a)

KOP 3 is designed to represent the view of the project from the perspective of motorists traveling westbound on Old Spanish Trail Highway and visitors to the St. Therese Mission, currently under construction. The mission is located 0.75 mile east of the eastern boundary of the HHSEGS project, The 17.5 acre campus-style environmental park will function primarily as a columbarium. St. Therese Mission⁹, will include the following structures and activities:

- A small chapel;
- Two enclosed columbarium buildings, each built to store 2000 niches;
- An outdoor garden featuring 68 family columbaria and 132 garden niches;
- A restaurant with indoor and outdoor seating space and banquet area;
- A visitor's center with offices;
- A children's playground and a small dog park;
- A residential unit developed for housing two full-time staff members; and
- A meditation garden will feature 14 life-sized Stations of the Cross.

St. Therese Mission includes areas set aside for large passenger busses navigating the entry area of the site and parking in dedicated bus parking stalls. Therefore, it may be safely assumed that the St. Therese Missions expects visitors to arrive by both automobile and bus.

Visual Sensitivity

Old Spanish Trail Highway is a two-lane roadway and the westbound direction provides drivers and passengers a panoramic vista of the Pahrump Valley and the Nopah Range.

⁹ <http://www.sttheresemission.com/>

The view from KOP 3 is of roadside edge elements in the foreground, such as fencing and wooden transmission poles, construction activities at St. Therese Mission in the middle ground, and the Nopah Range and Wilderness Area in the background. The view would be cohesive and highly scenic due to the panoramic nature of the horizon line formed by the Nopah Range were it not for the roadside elements in the foreground and construction activity in the middle ground. This combination reduces KOP 3 to moderate visual quality. Viewer concern takes into account views of residential, recreational and motoring viewers. The view at KOP 3 is primarily viewed by drivers and passengers. The overall scenic and panoramic view at KOP 3 creates moderate-high viewer concern for passing viewers.

Drivers and passengers along Old Spanish Trail Highway travelling westbound have a largely unobstructed view of the project site, giving KOP 3 a high degree of visibility. 2007 Traffic counts indicate 258 to 275 automobiles per day for this stretch of Old Spanish Trail Highway¹⁰. Staff observations concur with those figures. This is a low number of viewers¹¹. Upon completion of the St. Therese Mission, the number of viewers from KOP 3 may increase by up to 40 per day¹². For the purposes of this analysis, based on existing traffic data, the number of viewers is rated as low. At fifty-five miles per hour (nearly one mile per minute), the driver's attention is rightly more focused on the road and scanning for vehicles or pedestrians entering the roadway, and therefore their view duration at KOP 3 may be considered low to moderate¹³. Passengers, however, are more inclined to take in the passing view and so the view duration for passengers is naturally higher than for drivers. Passengers have the luxury of scanning the horizon and taking in the larger view, therefore they would experience a moderate view duration. The completion of the St. Therese Mission campus would increase the view duration significantly as, not only would visitors be entering the property in automobiles and busses, but would be lingering on the property for hours. This would give the future viewers from the Mission a high degree of view duration. Averaging the three viewing durations above, staff rates the view duration at KOP 3 as moderate.

Thus, based on the moderate visual quality and viewer exposure, and moderate to high viewer concern, overall visual sensitivity at KOP 3 is moderate.

Visual Change (Figures 20b, 20c)

The addition of the proposed project to the view from KOP 3 would add two very formidable and tall industrial power towers to the view. This is true of all of the KOPs. Other structures seen in the simulation, such as the air-cooled condenser unit at Solar Plant 2, are much smaller in comparison to the power towers strong vertical profile. The towers break the horizon line of the Nopah Range and clearly capture the attention of the viewer due to their stark contrast to the pristine wilderness area behind them. The

¹⁰ E-mail to Candace Hill from Joshua Hart, Inyo County Planning Director, April 3, 2012.

¹¹ CEC staff characterizes daily motor vehicle trips of 151-300 as low and 501-2,500 as low-moderate.

¹² Visitation expectations included in Conditional Use Permit #2010-02/St. Therese Mission, and Negative Declaration associated with the permit.

¹³ CEC staff generally characterizes view duration as low if less than 10 seconds, low-moderate 10-20 seconds, moderate 20-60 seconds, moderate-high 1-2 minutes and high longer than 2 minutes.

conical forms, thick vertical lines, industrial gray color, luminous tops and smooth surfaces are markedly different than any other landscape or built feature in the view. Insertion of the towers into the view provides a high degree of contrast to the existing view as there are no other structures like them in the vicinity. While existing structures such as wooden roadside transmission poles already provide a minor degree of vertical intrusion, the sheer size of two 750-foot tall towers and their mass (72 feet in diameter, capped by a distinct 102 foot diameter “head” that is the solar receiver) are disproportionate to anything else in the view and their dominance is high. While the two towers pierce the horizon line of the mountain range (known as skylining), they do not have the effect of blocking any views in a significant way, as might a more traditional gas-fired power plant, with its more horizontal structures. But the towers do interrupt the highly scenic panorama of the Nopah Range and Wilderness Area, therefore view disruption is moderate.

As a result of a Data Request by staff (DR 154-155), the applicant revised KOP 3 to illustrate the visual effects of airborne dust and particles (**Visual Resources Figure 20c**). KOP 3 was chosen for this revision as it is the closest KOP to the project site and the location where the visual effect of “haloing” or “tee-peeing” would be the most pronounced. The applicant references in the response to DR-154 that the “tee-pee” effect would be seen at either high humidity (RH) conditions (above 40 percent) or during hazy (i.e. dusty) conditions. The applicant discusses that high RH values are normally expected during the cool hours of the day (most typically in the morning). Therefore the “tee-pee” effect is more likely to be seen in the cooler hours of the morning or evening, when RH is highest. It is also stated that the effect may be more pronounced when the sun is low over the horizon. This would create a potentially higher incidence of visual distraction from the motorist’s perspective at KOP 3. If the sun were low in the horizon to the south (as in the winter months) or to the west (as in the summer months), the visual dominance and the potential view disruption of the scattering effect of light would add to the overall visual change, which under these circumstances would now both be characterized as high. This results in the overall visual change at KOP 3 as high.

The contrast and dominance of the project structures in the landscape as seen in the simulation are high and the view disruption of the Nopah Range is high. The overall visual change at KOP 3 is high.

KOP 3 Summary

Taking into account the moderate visual sensitivity and the high overall visual change, visual impacts at KOP 3 would remain significant even with mitigation. Views of the dominant power towers and bright solar receivers cannot be effectively screened. Views of other project structures may be partially screened with perimeter tree plantings, solid walls and fencing. Adoption of Condition of Certification **VIS-1** (Surface Treatment) and **VIS-2** (Landscape Screening) will reduce the project’s contrast with the surroundings by requiring neutral tones complimentary to the desert landscape and providing a perimeter screening consisting of vegetation, walls and/or screened fencing. Adoption of Condition of Certification **VIS-6** would provide remedial mitigation for the loss of scenic views from KOP 3 by providing an interpretive area highlighting the natural and cultural visual resources in the area. The interpretive area would benefit the public by providing information about the Wilderness Areas, National Recreation Areas, named peaks and

the Old Spanish National Historic Trail, all adversely impacted by the introduction of the project. This remedial mitigation and its public benefit does not, however, reduce the visual impacts to less than significant, and is offered as an educational tool.

Partial screening of the project may also occur with the buildout of the St. Therese Mission project. The Mission project will introduce various building structures and landscape plantings into the foreground partially masking the HHSEGS structures except for the power towers. A tree canopy on site, as shown in the renderings, would have the effect of limiting the direct view of lower-profile HHSEGS structures to visitors arriving and using the St. Therese Mission facility.

KOP 4 (Figure 21a)

KOP 4 is representative of the view from residences in Charleston View, the only residential community in California near to the project site. The community can be characterized as sparsely populated (population of 68 in 2010 census count, see footnote 4) and composed of scattered low-profile, one story structures and planted vegetation including trees and shrubs. Charleston View has a total of 34 housing units, 29 of which are occupied¹⁴. The lots are 2.5 acres in size and a street grid of unpaved roads exists and appears to be maintained by the County Public Works Department (grading). The community has uninterrupted views of Mount Charleston and the Spring Mountains, hence the name Charleston View. As seen in KOP 4, the long view from Charleston View extends northwest to the range of mountains adjacent to Pahrump, Nevada. Charleston View residents also have direct, uninterrupted views of the Nopah Wilderness Area to the west and the Pahrump Valley Wilderness Area to the south of the community. The subdivision, laid out and permitted in the 1960s, never even began to approach its full build-out capacity. Visual Resources Figures 12 and 13 are characteristic of the developed portions of Charleston View.

KOP 4 is located at the intersection of Silver Street and Charity Lane. The view is panoramic, with the Spring Mountains forming an unbroken horizon line. The view north along Silver Street takes the eye beyond Old Spanish Trail Highway and to brightness on the ground in the distance before the toe of the mountain range, which appears to be the sandy plateau of the landform locally-referred to as Hidden Hills. The foreground is composed of the unpaved roads, and some sparse desert vegetation with a large expanse of sandy soil exposed in the right portion of the view. The middle ground is occupied by a single house, sited at a roughly forty-five degree angle to the Silver Street and flanked by vegetation and other structures on the property. The west side of Silver Street has native desert vegetation that appears undisturbed in the middle ground. The background is composed of the distinct linear form of the Spring Mountains and the snow-covered peaks of Mount Charleston and Mount Stirling. The line of the mountain range is subordinate to the expanse of blue sky, which makes up approximately forty percent of the view at KOP 4. The low profile of the fore- and middle ground and long vistas to the mountains characterize this view.

¹⁴ CH2MHILL - Census 2010 PL 94-171 Data

Visual Sensitivity

The Spring Mountains provide a highly scenic backdrop to this view. To the residents, who have chosen to live within this viewshed, it may be perceived as picture-postcard-like in its scenic value, and therefore of high quality. Other than the low-profile buildings and scattered plantings, there is little to obstruct the view, which is highly visible from the treeline above and down the linear corridor of Silver Street. Typically, residential areas are considered to have a high degree of visual concern. As mentioned earlier, the 2010 U.S. Census counts the population in the vicinity of Charleston View as 68. Therefore the number of permanent viewers is moderately high¹⁵. Because of the permanent nature of residential viewers, the duration of the view is also extended and therefore is rated as high. Considering the high visibility of the open expanse, the moderate to high number of viewers and the high duration of the view, the overall viewer exposure is high. With the high visual quality, high degree of viewer concern and the overall high degree of viewer exposure, the overall visual sensitivity at KOP 4 is high.

Visual Change (Figure 21b)

The introduction of the structures for the HHSEGS facility into the view at KOP 4 dramatically alters the nature of the view from rural and highly scenic to highly industrial. The two power towers as seen on Silver Street are very visible and do not mimic any existing line, form, color or texture in the view. The verticality of the towers and their smooth conical form topped by a luminescent cap are in direct contrast to the horizontal, soft-edged forms of the natural vegetation and low profile of the existing residential structures and plants. The industrial gray tone of the tower and the bright white solar receiver on top are in marked contrast from the low-key, natural desert palette. While gray foliage is characteristic of some of the desert plant species seen in the view, they are accompanied by plants of various hues of browns, tans and greens. The sleek, smooth surfaces and strong vertical directionality of the towers adjacent to the coarse, gravelly texture of the roadbed and the irregularity of the desert vegetation and scattered structures is not conducive to the surrounding area, therefore the visual contrast is high.

The broad, panoramic horizon line of the Spring Mountains and expansive blue sky are both pierced by the towers. The two 750-foot towers with their luminescent solar receiver caps dominate the landscape so completely that it will be hard to imagine the unbroken, highly scenic quality of the existing view. It is noted here that staff conducted reconnaissance trips to the Pahrump Valley several times and have made note of some of the valley's tallest and largest existing structures as reflected in **Visual Resources Figures 15 and 16**. There is nothing in the entire valley that dominates the landscape in the way the towers would as shown in the KOP 4 simulation, therefore, dominance is high. The high visual quality and continuity of the view of the mountains and expanse of sky is disrupted by the industrial towers and their introduction would cause some view disruption. View disruption is moderate to high. High visual contrast and dominance together with moderate to high view disruption yields a high degree of overall visual change.

¹⁵ CEC staff characterizes residential viewers as very low: 1 or none; low: 2 to 5; low-moderate: 6-20; moderate: 21-50; moderate-high: 51-100; and high: more than 100.

KOP 4 Summary

Overall visual sensitivity is high and overall visual change is high at KOP 4, so visual impacts at KOP 4 would be significant and unavoidable. Adoption of Condition of Certification **VIS-1** would ensure the project structures other than the towers and SRSGs do not contrast with the surroundings by requiring neutral tones complimentary to the existing desert landscape. Implementation of Condition of Certification **VIS-2** would have some screening effect from this distance on the lower project structures, such as the air-cooled condenser. Adoption of Condition of Certification **VIS-6** would provide remedial mitigation for the loss of scenic views from KOP 4. The applicant's proposed Mitigation Measure 5 and staff's proposed Condition of Certification **VIS-7** provide for tree plantings on the property of Charleston View residents. For those who choose this option, it may partially screen the view of the power towers. It may also, in some instances, have the effect of screening the resident's highly scenic view of the northern portion of the Spring Mountain range. The planting of trees, however, does not provide complete mitigation for the visual impact of the towers. Therefore, the visual impacts would remain significant and unavoidable.

KOP 5 (Figure 22a)

KOP 5 primarily represents the view of the motorist travelling eastbound on Old Spanish Trail Highway, which overlooks the greater Pahrump Valley. It also represents the view of visitors to the Nopah Wilderness Area. **Visual Resources Figure 17** and AFC Figure DR 32-1 (not included in this section) show the visibility of the towers and the heliostat field respectively. Based on the applicant's visibility models, and staff's own field visits, the KOP 5 location on the road is where the valley becomes visible to the motorist for the first time travelling eastward from Tecopa. The viewer has a panoramic view of the valley and the Spring Mountains, with Mount Charleston centered in the frame. The foreground is made up of the asphalt roadway, gravel shoulder and a slightly rising slope with fairly dense native vegetation. The middle ground is comprised of the undeveloped valley floor. A portion of Old Spanish Trail Highway is visible traversing at an angle toward Mount Charleston in the right half of the frame of KOP 5. The background is composed of the unbroken line of the Spring Mountains and a vast expanse of blue sky.

Visual Sensitivity

At certain times of year, the scene of the Pahrump Valley is quite vibrant, with the dark bluish hue of the mountains with snow-capped peaks set against the medium blue sky and verdant vegetation adjacent to the roadway. Throughout the season, the views are panoramic and feature the focal point of Mount Charleston in the center of the view.

The Old Spanish Trail Highway snaking through the valley and the broad expanse of sky and mountains with ample vegetation is a picture-postcard quality scene of high visual quality and has a high degree of visibility. Motorists' visual concerns generally take in oncoming or roadside traffic, the ability to see clearly the road ahead, the existence of distracting or discordant elements and effects of glint or glare from both natural and human-developed causes. Natural causes may be the sun or a reflection on a water body and human-developed causes might be a reflection on car's window, headlights at night or lighting adjacent to the road. KOP 4 is largely devoid of much of those causes of glint and glare, other than the obvious headlights and possible sun

reflections on automobile glass. Viewer concern from the motorists' perspective is moderate. There are expected to be at least some recreationists in the Nopah Wilderness area who would have a higher level of viewer concern, due to the very nature of the designated scenic wilderness in which they have chosen to spend time, as the BLM describes it, in "places of solitude where people may experience freedom from our fast-paced industrialized society". That would place the viewer concern as high. A combined viewer concern of the motorist and the recreationist is moderate to high. Staff investigated visitation figures for the Nopah Wilderness Area with BLM staff at the Barstow Field Office. BLM staff was unable to provide visitation counts as they do not keep these records. BLM staff mentioned that logs are kept on some outdoor recreation sites, but there is no way to verify those figures. Staff agrees with the applicant that the number of viewers is low. As mentioned in the analysis of KOP 3, the traffic data for Old Spanish Trail Highway in the vicinity of the proposed project, and staff's own observations, indicate the number of motorists is low. Therefore, the combined number of recreational and motoring viewers represented by KOP 5 is low.

Duration of views would be different for motorists and recreationists. At this fixed point, the view would be quite fleeting for the motorist. Compared to the view duration of KOP 3, from KOP 5, the entirety of the valley can be seen for some time descending from the Nopah Range to the valley floor, a distance of approximately nearly five miles to the project center. KOP 5 is described as 3.8 miles west of the project site boundary in the AFC. The center of the power blocks, where the power towers are located, is approximately 5 miles from KOP 5. At a speed of approximately one mile per minute, the project's power towers would be in full view of the motorist for nearly five minutes, which is considered a high view duration. Likewise for the recreationist, who is hiking, or camping, possibly enjoying the solitude of the view, the duration would be high. As both views would last longer than two minutes, view duration at KOP 5 is rated as high. Overall viewer exposure, made up of high visibility, low number of viewers, high duration of view, is moderate to high. Overall visual sensitivity at KOP 5 is comprised of high visual quality, moderate to high viewer concern and viewer exposure and is therefore rated as high.

Visual Change (Figure 22b)

The introduction of the industrial structures of the proposed power plant creates strong contrast with the existing view. The simulation reveals a clearly visible project footprint and field of mirrors. The height of the towers nearly extends into the horizon line of the mountains, stopping just short. The vertical line and cylindrical form of the towers is unlike anything else seen in the view. The broad horizontal expanse of heliostats creates the illusion of a lakebed on the valley floor and introduces a strong horizontal line that did not exist before. The smooth gray concrete towers capped with a radiant solar generator do not blend in with the natural hues of the desert floor, mountains and sky. The project facilities at the base of towers, while noticeable even at this distance, do not contrast in the same overt way as the towers themselves. The facilities are shown in colors suited to the desert environment. The simulation shows areas of brightness within the heliostat field. The contrast with the existing view at KOP 5 is high. The simulation does not represent the actual brightness of the SRSG, which when viewed from KOP 5 would appear to be slightly above the direct eye level of a motorist. (The elevation of KOP 5 is approximately 143 feet above the valley floor location of

Solar Plant 2¹⁶). The direct view of the brightly illuminated SRSG would present an extreme visual change for the motorist who has just travelled through a canyon road bounded by natural vegetation and landform features.

The proposed project is co-dominant with other features in the landscape at KOP 5. From this distance, the project towers are subordinate to the peaks of the Spring Mountains. They remain below the horizon line of the peaks, and yet compete for the viewer's attention as focal points, therefore dominance is moderate. As the towers are not breaking the line of the mountains, and have a great deal of visual space between them from this viewpoint, the view disruption is moderate. In terms of high contrast, moderate dominance and moderate view disruption, the net overall visual change is moderate to high.

KOP 5 Summary

Overall visual sensitivity is moderate to high and overall visual change is moderate to high, consequently visual impacts would be significant and unavoidable. Recommended adoption of Condition of Certification **VIS-1** would ensure the project structures other than the towers do not contrast with the surroundings by requiring neutral tones complimentary to the existing desert landscape. However, the visual impact of the towers and the SRSGs is unmitigable.

KOP 7 (Figure 24a)

KOP 7 was selected to represent the view of the project site from the perspective of a hiker or driver following what is identified in many documents as the Old Spanish National Historic Trail (OST) and/or the Mormon Trail (see citations on **Visual Resources Figure 2**). As the actual traces of the historic trails have not been inventoried and published, for the purposes of this analysis staff would proceed on the assumption that remnants of the historic trails are in the vicinity of the alignment provided by the National Park Service, as seen in the composite Visual Resources Figure 2. The two-track path, seen in KOP 7, is also used by four-wheel drive motorists. Staff has seen evidence of vehicle tire tracks on several site visits. The location of KOP 7 also places it just outside the bounds of the Pahrump Valley Wilderness Area and therefore also represents the view of potential recreationists within the wilderness area, as well as those following the historic trail route on foot or by vehicle.

In the foreground, fairly dense desert vegetation carpets the gravelly soil. Leading off to the right is one track of the two-track path of the Old Spanish/Mormon Trail. The middle ground reveals a broad expanse of valley floor, culminating in the sandy cliffs of the Hidden Hills escarpment. From there, the Spring Mountains rise majestically, with Mount Charleston crowning the range with its snow capped peak. The bluish cast of the mountains nearly blends into the sky above, and yet the horizon line of the ridge is distinct. At certain times of year, the hue of the range is dark blue and capped with snow (see **Visual Resources Figures 6, 7 and 21a**). The vegetation in the foreground displays a surprisingly varied palette of hues from brown to gray to dark green to lighter green, and it is nicely set off by the medium tan and brown tones of the gravelly soil

¹⁶ Google Earth 2012

below. Like the other KOPs, this frame features a large expanse of sky as a co-dominant element.

Visual Sensitivity

The panoramic view of desert valley floor, regal mountains and large expanse of clear blue sky, with little interruption in the way of human development, is of high scenic quality. During the times of year when vegetation becomes dormant, the residential structures of Charleston View appear faintly in the middle ground, to the right of the frame, due to lack of screening. Even then, at this distance, the structures are barely discernable in the view.

Viewers at this location are locals traversing the two-track path in their four-wheel drive vehicles and recreationists. For motorists, the viewer concern would be low-moderate as they would likely be intent on navigating the path safely and reaching their destination. Recreationalists would naturally have a higher degree of viewer concern, as they would be traveling more slowly and taking in the surroundings, including the panoramic view as shown in KOP 7 as well as the views to and within the Pahrump Valley Wilderness Area. Therefore, staff finds a moderate level of viewer concern at KOP 7. As mentioned earlier, the BLM Barstow field office does not have visitation figures for the wilderness area or the historic trail. Staff observations are that vehicular use of the path appears to be light; there was never more than a singular set of tire tracks evident at any of the site visits staff made to this KOP.

Visual Resources Figure 5 shows the two-track path headed in a southwesterly direction near this same viewpoint. One can see evidence of vehicle use but it does not appear to be highly impacted by multiple tire tracks. **Visual Resources Figure 7** shows the trail alignment in an easterly direction toward Mount Charleston and the vehicular use appears to be even lighter. Staff concludes that the number of viewers is very low at KOP 7. From KOP 7, the view is panoramic and unobstructed, giving it a high degree of visibility. The duration of views would vary, with motorists having shorter views than recreationists. Drivers would be focused on traversing the unpaved path but passengers would have undistracted views. Recreationalists would experience longer view durations. Given the various types of viewers, the duration of view is moderate-high at KOP 7. Considering the high degree of visibility, the low number of viewers and the moderate-high duration of view, the overall viewer exposure is moderate.

It should be noted that BLM is developing an Old Spanish Trail (OST) Interpretive Auto Tour for California (Las Vegas to Los Angeles). The auto tour is modeled after the National Park Service National Trails System National Historic Trails Auto Tour Route Interpretive Guides and will be presented both in physical booklet form and online as a PDF. The auto tour stays on paved roads: highways, interstates, city roads, etc. and its path approximates the OST corridor. Selected OST historical sites, museums, state historical markers, parks and trails will be listed as tour stops. The publication of this auto tour may have the effect of increasing visitorship to the off-road trails and sites along the route in the future, thereby increasing the viewer concern.

The high visual quality of the scene, with moderate viewer concern and exposure yields a moderate to high overall visual sensitivity. This is borne out as the KOP represents

both the view from a wilderness area as well as from a point on a national historic trail, where viewer concern should be higher than average.

Visual Change (Figure 24b)

The introduction of the HHSEGS structures into the KOP 7 view would alter the landscape substantially. The vast scene of natural features and broad horizontality would be disrupted by the strong vertical lines of the power towers in the middle ground. The smooth, cylindrical towers, with their luminescent caps, would be in direct opposition to the texture of natural landforms and vegetation seen in the view, therefore contrast is high. The proposed facility, including the broad array of reflective mirrors, would dominate the view. Even though the towers do not break the horizon line of the mountains, their appearance in the tranquil desert landscape is jarring and commands the viewer's attention. Dominance is moderate to high. The towers disrupt the continuous horizontal refrain of valley floor and mountain range and in so doing, introduce an element of view disruption. By not extending into the ridgeline's horizon, the effect of disruption is reduced. View disruption is moderate. The overall visual change at KOP 7 is moderate to high.

KOP 7 Summary

KOP 7 has a moderate to high overall visual sensitivity and a moderate to high degree of visual change, consequently visual impacts would be significant. Implementation of the proposed conditions of certification would not substantially reduce the impacts at this KOP. Adoption of Condition of Certification **VIS-1** would reduce the contrast with the surroundings by requiring neutral tones complimentary to the existing landscape but the unobstructed view of the project structures, including the towers, prevents any mitigation which would reduce the overall impact to less than significant. Adoption of Condition of Certification **VIS-6** would provide remedial mitigation for the loss of scenic views from KOP 7.

KEY OBSERVATION POINTS IN NEVADA

While BLM is the lead agency for NEPA analysis in Nevada and has the responsibility to assess visual impacts and assign conditions to the portions of the project in Nevada, Energy Commission staff have analyzed the visual impacts of the solar plant in California on the KOPs in Nevada.

In addition to the Nevada KOPs provided by the applicant, staff briefly analyzed the impacts from the perspective of motorists on Highway 160 and recreationists in the Spring Mountains Recreation Area.

State Highway 160 in Nevada is the primary throughway for the Pahrump Valley. The descent into the Pahrump Valley from the east presents the motorist with a high quality view of relatively undisturbed landscapes. While a KOP has not been established from Highway 160, it is important to note the high degree of visibility of the valley floor to motorists travelling northwest on the highway from Las Vegas toward Pahrump (See **Visual Resources Figure 14**). Based on the 2008 traffic counts provided by the Nevada Department of Transportation, SR 160 carried approximately 8,900 vehicles daily at a point just west of the Old Spanish Trail Highway turnoff. Traffic counts in

subsequent years have fallen from the 2008 levels. However, the traffic counts still represent a moderate to high number of viewers¹⁷. With the view duration fairly extended, even at 70 miles per hour, the view toward the project site would last for several minutes, therefore providing high view duration¹⁸. While drivers may be focused on the road ahead, passengers would have the opportunity for an extended view toward the project site. Given the distance from the project, the viewer concern from SR 160 is low to moderate. It is likely the view of the heliostat field would resemble a dry lake bed (not unlike Pahrump Dry Lake, which is also in the view from SR 160) from elevated positions. Therefore the contrast with the existing landscape would be low to moderate. The glow of the power tower receivers would be noticeable but not as bright as from locations closer to the project.

Considering the distance from SR 160, for example, from a point directly east of the project site, which is approximately 15 miles from the center of the project site, the visual impacts would be less than significant. The project would not dominate the landscape or disrupt the horizon line of the ridges. Staff concludes that while the project would be visible and noticeable from SR 160, the contrast, dominance and disruption would be low to moderate, therefore overall visual change is low to moderate.

In response to comments received from Basin and Range Watch, staff analyzed the view toward the proposed project site from a high elevation position in the Spring Mountains National Recreation Area in Nevada. Using a photograph and Universal Transverse Mercator (UTM) provided by Basin and Range Watch, staff mapped the position of the photograph taken from the Bonanza Peak Trail, northwest of Mount Charleston. The elevation of this point is approximately 9,882 feet above sea level (ASL). The view distance from the trail point to the project site is approximately thirty miles. Staff was able to create a simulation of the proposed project in the view from the trail. Visual Resources Figure 26 includes a simulation of the view from the Bonanza Peak Trail and map of the viewpoint location. Staff has determined that, while the project would be visible from this location, the distance and atmospheric interference would lessen the visual impacts to less than significant. The contrast of the towers with the landscape at large is low-to-moderate from this high-elevation view. It is the reflection from the mirrors which would create the greatest contrast, and yet it would not likely be much different visually than the dry lake bed also visible from this viewpoint. Staff appreciates the opportunity to review this viewpoint and finds that the impacts on visual resources would be less than significant from this location.

KOP 1 – View from Old Spanish Trail Highway Westbound, Nevada (Figures 18a-18b)

The view from Old Spanish Trail Highway is an important view from the motorist's perspective. This is a travel route to and from Tecopa, California, a small community approximately 34 miles west from Nevada Highway 160. The current view across the Pahrump Valley is largely undisturbed and highlights the Nopah Range to the west and

¹⁷ Energy Commission staff characterizes 5,001-10,000 motorists as a moderate to high number of viewers.

¹⁸ Energy Commission staff characterizes view durations longer than 2 minutes as high.

the Pahrump Valley Wilderness to the south. The terrain drops slowly in elevation as the road approaches the California-Nevada state line, approximately 9 miles from the intersection of Old Spanish Trail Highway and Nevada Highway 160. KOP 1 was selected to represent the motorist's view at a point where the project structures become highly visible from the road, approximately 1.75 miles from the closest portion of the project site.

Visual Sensitivity

The existing view is uncluttered by human elements, except for the roadbed and shoulder (Figure 18a). Mesquite coppices are visible in the foreground. The middle ground is an expansive plain of Mojave Desert vegetation. The Nopah Range forms a formidable backdrop to this view, its craggy slopes offering contrast to the relative smoothness of the desert floor below. It has a high degree of visual quality due to the undisturbed nature of the view. Viewer concern is from the motorists' perspective and is high, given the highly scenic and undisturbed view of the desert and the Nopah Range. The view from KOP 1 has a high degree of visibility, as there are no foreground or middle ground elements to disturb the panoramic scene of the Nopah Range in the background. Traffic counts from the Inyo County portion of the Old Spanish Trail Highway indicate 258 to 275 automobiles per day, which can be extracted to apply to the Nevada segment of this roadway. This is a low number of vehicles and therefore viewership is low. It is interesting to note that some of the vehicle trips made on this road have an ultimate destination of either Dumont Dunes Off-Highway Area or Death Valley National Park. Death Valley visitors may have a heightened degree of sensitivity to the scenic qualities of the natural desert environment around them. While the duration of the view at the KOP may be fleeting, the length of time the general panoramic view is seen by the driver and passengers is several minutes. Given that the project site would be visible from Highway 160 to the state line, a distance of nearly 10 miles, the duration of view is high. Taking into account the high visibility, low number of viewers and high duration of view, overall viewer exposure is moderate to high. In conjunction with high visual quality, high viewer concern and moderate to high overall visual concern, the overall visual sensitivity at KOP 1 is high.

Visual Change

With the Nopah Range and Nopah Peak as the backdrop for KOP 1, the power towers rise vertically from the valley floor in direct contrast to the broad horizontal lines of the expansive desert floor and horizon line of the mountain range (Figure 18b). Topography appears to mask the view of the heliostat array but the power block facilities, such as the air-cooled condenser, may be seen at the base of Solar Plant 2's power tower, to the left of center of the frame. This KOP also shows the lower portion of a transmission pole in the left of the view. These transmission poles are proposed to be installed parallel to Old Spanish Trail Highway. The power towers and transmission structures would collectively dominate the view and while there is no view disruption or skylining (structures breaking the horizon line) by the power towers from this viewpoint, the transmission poles disrupt the panoramic quality of the view. Dominance is moderate to high and view disruption is moderate. The contrast of the industrial scale structures with the surrounding undeveloped desert landscape is high. Moderate to high dominance, moderate view disruption and high contrast creates a scenario of an overall moderate to high degree of visual change to the view. The visual impacts of the proposed project at

KOP 1 would be high, and considered significant and unavoidable and are unmitigable from this vantage point.

KOP 2 – View from Stump Springs ACEC, Nevada (Figures 19a-19b)

Stump Springs is an Area of Critical Environmental Concern (ACEC). Areas of Critical Environmental Concern are special management areas designated by BLM to protect significant historic, cultural, or scenic values, fish and wildlife resources, natural process or systems, and natural hazards. In southern Nevada, twelve ACECs protect and preserve irreplaceable significant cultural resource sites that include prehistoric rock art sites, prehistoric village and habitation sites, and historic mining, town, railroad, and trail sites. These sites are either eligible for, or are on the National Register of Historic Places (NRHP)¹⁹. Stump Springs is believed to be located on a segment of the Old Spanish Trail and/or the Mormon Trail and was used by the Native Americans who lived in and around Pahrump Valley. While actual trail traces have not been formally documented and recorded, the general corridor of all of the historic trails would have included Stump Springs. (See discussion of trails in KOP 7 and Regional Setting above, and in the Cultural Resources Staff Assessment).

KOP 2 represents the view of a visitor to the historic springs toward the project site, and is approximately 2.3 miles from the eastern edge of the project site. Existing conditions reveal desert vegetation and sandy dune-like terrain in the foreground and the strong horizontal line of the Nopah Range in the background. The view is taken at a high point above the actual streambed of the spring area. The view is undisturbed by the introduction of human elements and likely remains very similar to the view during the historic periods of use. Lacking a scenic middle ground, the visual quality is moderate to high. Based on its status as an ACEC, viewer concern is high. No visitation counts are available, but the numbers of viewers is believed to be low. While in the early 20th Century, Native American tribes used the site for gatherings (story related to staff by Elders of the Pahrump Paiute on August 1, 2011), staff has observed in numerous site visits that the area now seems more likely to be used by four-wheel drive enthusiasts or campers. Due to the intervening topography, visibility toward the project site is considered moderate to high. It is difficult to establish a view duration, but staff estimates it to be low to moderate as the attention of the viewer is likely more on navigating the 4WD track or finding the springs themselves. The overall viewer exposure is therefore low to moderate. Taking into account the moderate to high visual quality, high viewer concern and low to moderate viewer exposure, the overall visual sensitivity at KOP 2 is moderate to high.

Introduction of the project's power towers into the simulated view (Figure 19b) adds two strong vertical architectural elements that provide a high degree of contrast with the existing conditions. There are distinct changes in lines, forms, and texture in the simulated view. Change in color tones is more moderate for the towers themselves, as they are depicted as a dull gray, but the brightness of the solar receivers stand out from the blue hues of the Nopah range in the background. Similar to KOP 1, there is no skylining, and moderate view disruption. With the foreground terrain partially blocking the view of the towers, they appear co-dominant with other elements in the view,

¹⁹ http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/lvfo_recreation/accessing_your_public/acec_information.html

particularly the balancing peaks of the Nopah Range. The towers are unmistakable, due to their height and luminance, therefore dominance is moderate to high. Taking into account the towers high degree of contrast, moderate to high dominance and moderate view disruption, the degree of visual change is moderate to high.

The project as simulated in KOP 2 would have a moderate to high impact on visual resources. The impacts are significant and unavoidable and there is no feasible mitigation.

KOP 6 – View from Thorne Drive at Homestead Road, Pahrump, Nevada (Figures 23a-23b)

KOP 6 represents the view of the project site from the southern extents of Pahrump, Nevada, approximately 5.5 miles northwest of the project's northern boundary. Pahrump is an unincorporated city with 36,441 residents and is the largest township in Nye County. Located within a residential area, across the street from some houses, the existing view from KOP 6 is composed of desert landscape from foreground to middle ground and the Pahrump Valley Wilderness with the distant Kingston Range in the background. A compound of residential and agricultural structures is visible in the middle ground, before it gives way to the horizon line. The existing view is mixed, without uniformity or a clear visual character. The mountain ranges are quite distant and therefore do not add a high degree of definition to the view.

Visual Sensitivity

The mixed nature of the view from KOP 6 (Figure 23a) and the diminished stature of the mountain ranges from this distance provide a moderate degree of visual quality. Viewer concern from residential areas is typically treated as high. Google Earth imagery from October, 2011, indicates a residential development of approximately 25 homes in the vicinity of KOP 6. About 15 of those homes are oriented in such a way that they may have views directly toward the project site. Others have intervening structures or vegetation that would limit the duration of their views. In this case, view duration must also take into account motorists on Homestead Drive travelling southbound. As this development is isolated from other development in Pahrump, it is not likely that there is a great deal of through traffic. Therefore, view duration is rated as moderate, because of the balance of permanent potential views from some of the residences and temporary, short-term views from motorists and other residents. The number of viewers is moderate, falling into the 21-50 range as far as permanent residential viewers are concerned. Viewer exposure at KOP 6 is moderate. Moderate visual quality combined with high viewer concern and moderate overall viewer exposure provides a view with moderate to high visual sensitivity.

Visual Change

The visual simulation of the project (Figure 23b) shows the two towers nearly in alignment with one another, due to the angle of view. The profile of the power towers do not break the horizon line of the mountain range and would appear more distinct from the background if it were a cloudless day with blue sky. From this distance, the view disruption is low. As shown in the simulation, the contrast of brightness of the solar receivers to the background is poorly represented. The SRGS would be much brighter and highlighted against the medium to dark tones of the mountain range. The

brightness of the SGSGs and scale of the towers as seen from this distance could be likened to the look of stadium lights from a lesser distance as seen during daylight hours. The muted color of the tower structure reduces the contrast to the existing surrounding condition. The muted colors and distance from the KOP combined with the brightness of the SRGs would provide a moderate to high degree of contrast. The towers in the background are co-dominant with foreground and middle ground elements. An intervening rise in topography obscures the bases of the power towers and the plant facilities. Without clear dominance, view disruption or a high degree of contrast, the overall visual change is moderate. The overall visual impact from the introduction of the power towers and SRGs to the existing view is low to moderate and less than significant at KOP 6.

Overall Project Operation Impacts on Existing Visual Character or Quality

Project operation impacts from six of seven identified KOPs on the existing visual character and quality of the setting would be significant and unavoidable, even with staff-recommended conditions of certification. Proposed Condition of Certification **VIS-1**, Surface Treatment, would reduce the project's color contrast with the surroundings by requiring neutral tones complimentary to the existing desert landscape; proposed Condition of Certification **VIS-2**, Landscape Improvements, Permanent Fencing and Screening, would provide a screen of vegetation and fencing that would partially mitigate the visual impact of the project structures on viewers at KOP 3. Implementation of Conditions of Certification **VIS-3**, Permanent Exterior Lighting, would control the lighting to minimize off-site spillage. Proposed Condition of Certification **VIS-6** would provide remedial mitigation for the loss of scenic views. **VIS-7** would add varying degrees of reduction of the visual impacts to Charleston View residents during operation, but there is no mitigation for the impacts of the 750 foot tall towers topped by a very bright SRSG and lighted at night with aviation safety lighting. No mitigation is suggested for KOPs 1, 2 and 6 in Nevada. Even with these measures, the impacts from the project at operation would substantially degrade the existing visual character and quality of the site, and its surroundings, as perceived by sensitive receptors in the project viewshed.

**Visual Resources Table 4
OVERALL VISUAL CHANGE**

KOP No.	VISUAL SENSITIVITY (Existing Condition- California)						
	Visual Quality	Viewer Concern	Viewer Exposure				Overall Visual Sensitivity
			Visibility	No. of Viewers	Duration of View	Overall Viewer Exposure	
1	High	High	High	Low	High	Moderate to High	High
2	Moderate to High	High	Moderate to High	Low	Low to Moderate	Low to Moderate	Moderate to High
3	Moderate	Moderate to High	High	Low	Moderate	Moderate	Moderate
4	High	High	High	Moderate to High	High	High	High
5	High	Moderate to High	High	Low	High	Moderate to High	Moderate to High
6	Moderate	High	Moderate to High	Moderate	Moderate	Moderate	Moderate to High
7	High	Moderate	High	Low	Moderate-High	Moderate	Moderate to High

KOP No.	VISUAL CHANGE (Proposed Condition- California)							
	Project Effect							Overall Visual Change
	Contrast					Dominance	View Disruption	
Form	Line	Color	Texture	Overall Contrast				
1	High	High	High	High	High	Moderate to High	Moderate	Moderate to High
2	High	High	High	High	High	Moderate to High	Moderate	Moderate to High
3	High	High	High	High	High	High	High	High
4	High	High	High	High	High	High	Moderate to High	High
5	High	High	High	High	High	Moderate	Moderate	Moderate to High
6	Moderate	High	Moderate to High	Moderate	Moderate-High	Low to Moderate	Low	Low to Moderate
7	High	High	High	High	High	Moderate to High	Moderate	Moderate to High
KOP No.	KOP VISUAL IMPACT SIGNIFICANCE DETERMINATION- All KOPs							
	Overall Visual Sensitivity		Overall Visual Change		Visual Impact Significance		Mitigation (See Staff Proposed KOP Visual Mitigation)	

				Measures)
1	High	High	Significant and unavoidable	There is no feasible mitigation for KOP 1.
2	Moderate to High	Moderate to High	Significant and unavoidable	There is no feasible mitigation for KOP 2.
3	Moderate	High	Significant and unavoidable, even with mitigation for the foreground	Adoption of Condition of Certification VIS-1 , Surface Treatment, VIS-2 , Landscape Improvements, Permanent Fencing and Screening. These measures will not lessen the impacts to less than significant.
4	High	High	Significant and Unavoidable	Adoption of Applicant's Proposed Mitigation Measure 5 and Condition of Certification VIS-7, Tree Plantings, and VIS-2, Landscape Improvements, Permanent Fencing and Screening, will not lessen the impacts to less than significant.
5	Moderate to High	Moderate to High	Significant and Unavoidable	Recommended adoption of Condition of Certification VIS-1 would ensure the project structures other than the towers do not contrast with the surroundings There is no feasible mitigation for the towers for KOP 5.
6	Moderate to High	Low to Moderate	Less than significant	No mitigation suggested.
7	Moderate to High	Moderate to High	Significant and Unavoidable	Adoption of VIS-6 as Mitigation for Loss of Historic Context and Scenic Views from Historic Old Spanish Trail does not reduce the impacts to less than significant.

Linears

Transmission Lines

HHSEGS would interconnect to the Valley Electric Association (VEA) system. The interconnection would require an approximately 10-mile-long generation tie-line (gen-tie line) from the HHSEGS to the proposed Crazy Eyes Tap Station, where the project would interconnect to the VEA electric grid. The gen-tie line would originate at the HHSEGS' onsite switchyard, cross the Nevada state line, and continue east for approximately 1.5 miles until reaching Old Spanish Trail Highway. At Old Spanish Trail Highway, the route would head northeast paralleling Old Spanish Trail Highway until it reached the Crazy Eyes Tap Substation, which would be located immediately east of the Old Spanish Trail Highway /SR 160 intersection.

Pipelines

A 12-inch-diameter natural gas pipeline would be required for the project. The gas pipeline would enter the HHSEGS site in the common area where it would connect with an onsite gas metering station. It would exit the HHSEGS site at the California-Nevada border and extend 32.4 miles to the Kern River Gas Transmission (KRGT) existing mainline system just north of Goodsprings in Clark County, Nevada. The transmission and natural gas pipeline alignments would be located in Nevada, primarily on land managed by BLM. Staff anticipates there would be no adverse visual impacts in California during the operational phase as the proposed gas lines would be underground on the project site.

Water Supply and Discharge

Each solar plant and the administration building would incorporate a septic tank and leach field system for on-site disposal. Water from the solar plant equipment and the general plant drains would be recycled and reused on site. Waste separated from the water during the onsite treatment would be trucked off site for disposal. Staff anticipates no adverse visual impacts from these water supply and discharge lines during the operational phase as they would be underground and or located wholly within on site project structures, such as tanks, subject to the visual mitigation surface treatment, screening and lighting requirements contained in Condition of Certification **VIS-1**, **VIS-2** and **VIS-3**.

Publicly Visible Water Vapor Plumes

The HHSEGS cooling system is proposed to be a dry-cooling system with technologies to minimize water use. The air-cooled condensers would provide the bulk of the cooling for the power generation equipment. A partial dry-cooling system would be used for auxiliary equipment cooling. Based on the proposed technology for the HHSEGS facility and its location in the arid Mojave Desert, potential visible plumes may rarely occur from the cooling system and/or exhaust stack. Since visible plume formation is unlikely, staff did not conduct any modeling. Cooler temperatures are more favorable to formation of visible plumes, which would occur at nighttime or in the early morning or evening hours. As the solar plant would be operational only during daylight hours, the potential for visible water vapor plumes from normal operation is minimal. The night preservation boiler would provide super-heated steam to the system overnight and during other shutdown periods. There would be potential for visible water vapor plumes to form during the nighttime operation of the night preservation boiler. Visible plumes during normal daytime operation are anticipated to be infrequent. Any plumes that may form at

night would not likely be noticeable because uplighting would be minimized by staff's proposed Condition of Certification **VIS-3**.

B. LIGHT OR GLARE

"Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?" This discussion is separated into two sections: 1. Light and, 2. Glint and Glare, as these are quite different visual phenomenon.

Light:

Yes. The immediate area of Charleston View is sparsely settled and relatively dark at night. There are no existing streetlights along Old Spanish Trail Highway or on the project site as it exists today. There is some limited lighting within the residential areas of Charleston View. The lights of Pahrump are visible from some elevations. Discussions with local residents and the owners of several resorts in Tecopa indicate that the vast majority of nighttime lighting seen in the project area emanates from Las Vegas, at least 40 miles distant and screened by mountains. While several of the Tecopa resorts host astronomy gatherings taking advantage of the area's naturally dark skies, none of the resort operators' staff had concerns about the HHSEGS increasing nighttime lighting in the Tecopa area. During operation, the proposed project has the potential to introduce light offsite to the roadway and surrounding properties, and uplighting to the nighttime sky. If bright exterior lights were unshielded and lights not directed onsite they could introduce significant nighttime light to the vicinity. The 750-foot towers are well above the FAA threshold for aviation safety lighting and aviation safety lighting for the towers has been proposed and conditioned under Condition of Certification **TRANS-8**, Obstruction Marking and Lighting. Operational areas identified in the AFC in Section 5-13.4.2.3 requiring nighttime lighting include the power blocks, plant services building, switchyard and gas metering station. Other areas requiring lighting identified in AFC Section 2.2.10, Plant Auxiliaries, include those areas providing personnel with lighting under normal operating conditions, egress under emergency conditions and emergency lighting to perform manual operations during an outage of the normal power source. Additionally, portable lighting would be used to illuminate the areas where heliostat cleaning is taking place. It is further noted in the AFC, Section 5.13.4.2.3, that the exterior lighting would comply with International Dark Sky standards (no specific reference as to what those are) and would be shielded and directed to aim at the places where it would be needed to prevent spill-off of light off the project site.

Staff has reviewed Inyo County's General Plan and other regulations regarding outdoor lighting. The Inyo County General Plan, Goals and Policies Report, December, 2001, 8.8 Visual Resources, Policy VIS-1.6: Control of Light and Glare and Policy VIS-1.7: Street Lighting, addresses nighttime lighting in a limited way. The policies require that lighting be shielded and directed downward and that street lighting shall only be used to provide safety in regards to traffic movement.

The addition of the aviation safety lighting would substantially alter the nighttime appearance of the project area and would be prominently featured in the night sky due to the height of the towers and the number of lights required by the towers' size. The

applicant indicates there would be eighteen FAA warning lights on each tower. Once the project becomes operational, the visual impact of the federally required aviation safety lighting is unmitigable, and therefore would be significant. With effective implementation of the applicant's proposed light trespass mitigation measures as described in the AFC and staff-recommended Condition of Certification **VIS-3**, the project's operation-related lighting impacts, excluding FAA safety lighting, would be less than significant and are anticipated to meet the County requirements for nighttime lighting. Condition of Certification **VIS-3** requires a comprehensive lighting plan be submitted to the County of Inyo for review and comment and to the Energy Commission Compliance Project Manager (CPM) for review and approval. Staff recommends Condition of Certification **VIS-3** to ensure full compliance and verification of night lighting measures.

Glint and Glare:

Facility Surfaces:

No. Surfaces of the facilities of the HHSEGS (excluding the solar receivers and the mirrored surfaces of the heliostats, which are discussed below) have the potential to introduce glare into the visual environment. With the effective implementation of staff-recommended Condition of Certification **VIS-1**, the project would use colors and finishes on surfaces that do not cause excessive glare and would be in harmony with the project's desert environment (with the exception of the heliostat mirrors and SRGSs, discussed below). Implementation of staff-recommended **VIS-2** and **VIS-7** would reduce the visibility of project structures at the ground level and minimize the potential for adverse visual impacts to viewers at KOP 3 and 4. Staff recommends Conditions of Certification **VIS-1**, **VIS-2** and **VIS-7** to reduce the potential for adverse daytime glare impacts to less than significant and comply with LORS.

Heliostats:

No. Energy Commission staff has determined that the potential for a significant impact on Visual Resources from heliostat reflections does not exist for both ground based observers and airborne observers outside of the boundaries of the solar field project site during daytime conditions. The effective implementation of traffic and transportation's recommended Condition of Certification **TRANS-9**, Heliostat Operations Positioning and Monitoring Plan (HPMP), would insure that significant precautionary measures have been applied to the planned heliostat control algorithms to reduce the probability of direct solar heliostat reflections to ground observers outside the boundaries of the solar field project site. See Appendix VR-2 for a detailed analysis of the visual impacts of the heliostats.

Solar Power Towers/SRSGs:

Yes. Energy Commission staff has determined that the visual impact of the SRSGs solar reflections would have a significant and unavoidable impact. Please see the **Visual Resources Appendix VR-2, Visual Resource Glint and Glare Impact Assessment** and the **Traffic and Transportation** section, **Appendix TT1 – Glint and Glare Safety Impact Assessment** for a more detailed analysis of the visual impacts of the SRSGs.

CUMULATIVE IMPACTS AND MITIGATION

As defined in Section 15355 of the CEQA Guidelines (California Code of Regulations, Title 14), a cumulative impact is created as a result of the combination of the project under consideration together with past, present, and reasonably foreseeable future projects causing related impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. In other words, while any one project may not create a significant impact to visual resources, the combination of the new project with all existing or planned projects in an area may create significant impacts. A significant cumulative impact would depend on the degree to which (1) the viewshed is altered; (2) view of a scenic resource is impaired; or (3) visual quality is diminished. **Visual Resources Table 5** lists those projects located within the visible sphere of the proposed HHSEGS

**Visual Resource Table 5
Projects Considered in the Cumulative Impacts Analysis**

Project²⁰	County	Distance from Project Site	Visual Resources Characteristics	Status of Project
St. Therese Mission	Inyo (California)	0.5 mile	A 17.5-acre, campus-like development with outdoor garden spaces, low-profile structures and a tree canopy.	Permitted and under construction.
Pahrump Airport	Nye (Nevada)	Approximately 12 miles NW of HHSEGS	International Airport to supplement the McCarran International Airport in Las Vegas. 5,934 acre site adjacent to Pahrump, NV. 7,000 acre sphere of influence.	Draft EIS was in progress, but suspended June 2010. News reports in June 2010 suggest project on hold.
Element Power-Solar	Nye (Nevada)	6 ½ miles north of proposed HHSEGS in Nevada.	300 MW Photovoltaic, 4,160 acres	Plan of Development
Hidden Hills Valley Electric Transmission Project (NVN089669)	Nye and Clark, (Nevada)	Less than one mile from HHSEGS, extending 9.7 miles to Highway 160, Nevada and beyond.	A new substation located just east of HHSEGS in Nevada, 230 kV transmission line along Old Spanish Trail Highway to Highway 160. A new 10-acre substation at Highway 160 in Nevada. 53.7 miles of new 500kV transmission lines to El Dorado substation in Nevada. A new 230 kV transmission line to Pahrump, Nevada. Introduction of significant industrial-scale electric facilities in an area of high visibility.	DEIS Pending (BLM lead), expected for release in late 2012, early 2013
Sandy Valley (NVN090476)	Clark (Nevada)	8 miles east-southeast of HHSEGS near Highway 160.	Solar Power Tower Plant on BLM-managed land.	Plan of Development

²⁰ See Visual Resources Figure 25 for locations of the listed projects.

Three quarters of a mile to the east of the project in California is the St. Therese Mission, which is currently under construction. The St. Therese Mission is a 17.5 acre campus-style environmental park functioning primarily as a columbarium with garden niches and outdoor seating for reflection.

Renderings of the project show a tree canopy and a series of outdoor rooms connecting the buildings. It is a low-profile development with structure heights meeting the limitations of the Open Space designation and was found to be consistent with both the Inyo County General Plan and Zoning Ordinance²¹. It is slated to use desert plantings and colors in order to blend in with its environment. The County has reserved the right for additional 10 foot right-of-way along Old Spanish Trail Highway for turning lanes. Therefore it is assumed the project would be set back from the roadbed. This low-profile development would be in stark contrast to the heavy industrial solar electric plant next door. The Notice of Determination found it to be consistent with the General Plan and Zoning Code and did not find any adverse environmental effects that would exceed thresholds of significance either individually or cumulatively.

The community of Charleston View consists of a residential subdivision of two-acre or larger lots south of Old Spanish Trail Highway. Census counts indicate approximately 68 residents in the area and the existing number of scattered residences is 34, 29 of which are occupied. It is possible that, over time, if community services such as utility services upgrades, the community of Charleston View could experience some build-out. This would be low-profile development conforming to the General Plan designations of Rural Residential Medium Density (RRM), Resort/Recreational (REC) and Open Space and Recreation (OSR)²². Some of the various uses allowed in those General Plan designations are residential, recreational facilities, parks, campgrounds, restaurants, general stores and gas stations.

For the purpose of discussion of cumulative impacts of development in the project vicinity, staff has expanded the visual sphere of influence due to the high visibility of the power towers and the topography of the valley. Staff has chosen to assess the impacts of projects identified within the visibility range of the towers as depicted in **Visual Resources Figure 17** and shown on **Visual Resources Figure 25**.

The balance of the projects under consideration for cumulative visual resource impacts are in Nevada. Of particular note would be the development of a solar energy plant, Sandy Valley, utilizing power tower technology on BLM land along Highway 160. The area in question appears to be VRM Class IV, which, under BLM guidelines, would provide for activities that require major modification of the landscape and the degree of change can be high (see **Visual Resources Figure 4**). The other significant introduction of structures to the valley viewshed would be the transmission lines associated with HHSEGS. These transmission corridors would also be placed in VRM Class IV areas while these would parallel existing linear facilities, the scale of the new poles would be significantly larger. Existing wood poles along Old Spanish Trail

²¹ Notice of Determination, Inyo County, Conditional Use Permit #2010-02//St.Therese Mission, June 23, 2010.

²² Inyo County General Plan, Land use and Conservation/Open Space Elements, Diagram 29.

Highway are approximately 30 to 40 feet in height. The new poles would be 90 to 120 feet in height and would extend 9.7 miles from HHSEGS to the new Valley Electric Association Tap Substation. The new ten-acre Tap Substation would be located at the intersection of Old Spanish Trail Highway and Highway 160. Transmission line upgrades along Highway 160 would be replacing existing lines in some areas and introducing new lines in other areas. The HHSEGS project would introduce a new 53.7 mile 500kV single-circuit transmission line from the Tap Substation to the El Dorado Substation. A new 230kV transmission line would run from the Tap Substation to Pahrump, replacing an existing 138kV line. The net effect on views throughout the valley would be a noticeable increase in the number and size of electric transmission facilities.

A Draft Environmental Impact Statement (DEIS) from BLM for the Valley Electric Hidden Hills Transmission Project (NVN-089669) is pending publication. The DEIS would include an assessment of cumulative impacts of the projects planned in Nevada. Energy Commission staff has not been able to reference BLM's preliminary findings as part of this analysis because publication of the DEIS is pending as of this writing.

Other projects planned in Nevada include the Element Solar photovoltaic project and the Pahrump Airport. Photovoltaic projects typically are low profile and do not include tall, highly visible ancillary facilities such as air cooling units or boiler stacks, and therefore visibility would be more limited and localized than with the power tower configuration. The project would be likely highly visible from Highway 160 and would require some mitigation measures to protect motorists and other viewers from distracting light, glint or glare. The Pahrump Airport would include a control tower, which might be in the range of 75 to 100 feet in height. Otherwise, the hangar and passenger facilities would likely be relatively low-profile and only visible in a localized way.

The greater viewshed of the Pahrump Valley would be altered significantly if HHSEGS is constructed in addition to these projects as planned. This would result in a significant cumulative impact on the viewshed. Views of the Spring Mountains, the Nopah and Pahrump Valley Wilderness areas would be impaired by the introduction of additional power towers and large-capacity transmission lines. While the proposed transmission and Sandy Valley power tower projects would be located in VRM Class IV areas, the visual quality would be diminished by the industrialization of the landscape. There would be the potential for significant adverse cumulative effects. For viewers in Charleston View, only the proposed Sandy Valley power towers and transmission lines along Old Spanish Trail Highway would be potentially visible. The Sandy Valley project would be approximately 10 miles away, and using KOP 6 as an example, from that distance, the towers would appear quite small. Due to elevation changes, only the upper portions of the towers would likely be visible and the contrast with the mountains and desert landscape would be moderate. From Charleston View, views of the new transmission poles along Old Spanish Trail Highway would diminish quickly and terrain changes would block their view as they progress eastward along the road.

However, the experience of the motorists who traverse the valley would be that of driving through an area that has been industrialized by the addition of two substantial solar power tower projects and their associated transmission linears. For instance, a

motorist travelling from Las Vegas to Tecopa would encounter not one, but two large scale solar power tower projects and their associated transmission facilities. This would be a dramatic shift in the viewshed from the relatively undisturbed and low-profile Mojave desert landscape that exists today.

The connected actions of HHSEGS and its related linears, in conjunction with the reasonably foreseeable proposed development projects in the greater Pahrump Valley viewshed would be cumulatively considerable, significant and adverse. This result would be that, in spite of the fact that much of the proposed energy-related development is on BLM land classified as VRM IV, which provides for major modification of the existing character of the landscape, a high degree of change and features of the projects may dominate the views.

COMPLIANCE WITH APPLICABLE LORS

Staff evaluates the project to determine compliance with federal, state and local laws, ordinances, regulations and standards. Federal and state laws reviewed generally fall under scenic by-way and highway designations. No National Scenic By-Ways or State Scenic Highways are located within the project vicinity; therefore there is no discussion of conformance with these laws in this section

Staff has reviewed applicable laws, ordinances, regulations and standards and the project's consistency with those LORS. Staff concludes that, even with conditions, the project is not in conformance with all applicable LORS, as summarized below.

VISUAL RESOURCES Table 6
Compliance with Applicable Laws, Ordinances, Regulations, and Standards

LORS			
Source	Policy and Strategy Description	Consistency Determination	Basis for Consistency
CALIFORNIA			
State of California AB 1881 (2006), Water Efficient Landscape Ordinance (WELO).	Local agencies were required to adopt a WELO based on the state model by January 31, 2010, or the state's model ordinance would be applicable within the jurisdiction of the local agency. Inyo County has not adopted its own ordinance, therefore the state model ordinance applies.	Yes, as conditioned	Landscape and irrigation plans that meet WELO requirements are conditioned in Condition of Certification VIS-2 .

LORS			
Source	Policy and Strategy Description	Consistency Determination	Basis for Consistency
LOCAL			
Inyo County, California			
Inyo County General Plan, Goals and Policies Report, December, 2001. Land Use Element, Policy LU-1.15: Buffers.	As part of new development review, the County shall require that residential development/districts are protected from non-residential uses by use of buffers or other devices. Landscaping, walls, building/facility placement, and other similar aesthetically pleasing devices are acceptable for this purpose.	Yes, as conditioned	Perimeter screening with vegetation is included in Condition of Certification VIS-2 .
Inyo County General Plan, Goals and Policies Report, December, 2001. Land Use Element, Policy LU-4.9: Landscaping.	The County shall require landscaping to screen industrial uses.	Yes, as conditioned	Landscape screening is required in Condition of Certification VIS-2 .
Inyo County General Plan, Goals and Policies Report, December, 2001. Public Services and Utilities, Policy PSU-1.7: Undergrounding Utilities.	The County shall require undergrounding of utility lines in new development areas...except where infeasible for operational or financial reasons. Additional implementation measures are found in Table 4-4, page 4-44.	Yes	Project includes all underground transmission lines on-site.
Inyo County General Plan, Goals and Policies Report, December, 2001. Public Services and Utilities, Policy PSU-3.1: Efficient Water Use.	The County shall promote efficient water use by encouraging and enforcing water-conserving landscaping and other measures.	Yes, as conditioned	Compliance with WELO would meet this goal and is required in Condition of Certification VIS-2 .
Inyo County General Plan, Goals and Policies Report, December, 2001. Gas and Electrical Facilities, Policy PSU-10.1: Expansion of Services	The County shall work with local electric utility companies to design and locate appropriate expansion of electric systems, while minimizing impacts to agriculture and minimizing noise, electromagnetic, visual and other impacts on existing and future residents.	No	Conditions of Certification VIS-1, VIS-2, VIS-3 and VIS-7 minimize some of the visual impacts upon the existing and future residents of the county, but the visual impacts of the power towers are unmitigable and contrary to this policy.

LORS			
Source	Policy and Strategy Description	Consistency Determination	Basis for Consistency
Inyo County General Plan, Goals and Policies Report, December, 2001.7.3, Scenic Highways, Policy SH-1.1: Protect the Natural Qualities of Designated Scenic Routes.	The natural qualities of designated scenic routes should be protected. Definitions of scenic routes may be found in Section 7.3.1, page 7-11.	Yes	There are no designated scenic routes in the project vicinity.
Inyo County General Plan, Goals and Policies Report, December, 2001. 7.8 Canals, Pipelines and Transmission Cables. Policy CPT-1.1: Placement of Corridors.	The County shall consider the visual and environmental impacts associated with placement of regional conveyance corridors. Table 7-7, page 7-33, lists implementation measures.	Yes	Conveyance corridors for this project are not located in Inyo County.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, 8.8.3: Visual Resource Issues.	Critical visual resource issues identified: <ul style="list-style-type: none"> • Maintain small town character; • Preserve panoramic views; • Maintain open natural character of the County; • Maintain visual resources of scenic corridors, highways and roadways. 	No	The project would have significant and unavoidable visual impacts on panoramic views within Inyo County. "Striking views of the contorted layers of the Nopah Range ²³ " would be impacted. Condition of Certification VIS-6 would provide limited remedial mitigation for the loss of scenic views within the County.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources. Goal VIS-1.	Preserve and protect resources throughout the County that contribute to a unique visual experience for visitors and quality of life for County residents.	No	Charleston View is a recognized community in the General Plan with "Striking views of the contorted layers of the Nopah Range." Views of the Nopah Range and other nearby scenic vistas would be disrupted by the project.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources. Goal VIS-1.1: Historic Character.	The County shall preserve and maintain the historic character of communities within the County.	No	The height of the towers inherently changes the landscape in the vicinity of the project and in the Old Spanish National Historic Trail corridor.

²³ Inyo County General Plan, p. 2-8, description of Charleston View.

LORS			
Source	Policy and Strategy Description	Consistency Determination	Basis for Consistency
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, Policy VIS-1.4: Equipment Screening.	Within communities, building equipment shall be screened from public view.	Yes, as conditioned	Condition of Certification VIS-2 would ensure adequate screening of on-site building equipment from public view.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, Policy VIS-1.6: Control of Light and Glare.	The County shall require that all outdoor light fixtures...use low-energy, shielded light fixtures which direct light downward.	Yes, as conditioned	Condition of Certification VIS-3 and VIS-5 would ensure that lighting is shielded and directed downward during both construction and operation.
Inyo County General Plan, Goals and Policies Report, December, 2001. 8.8 Visual Resources, Policy VIS-1.7: Street Lighting.	Street lighting shall only be utilized where needed to protect public safety related to traffic movement.	Yes	No public right-of-way lighting has been proposed.
Inyo County Renewable Energy Ordinance, August 17, 2010.	<p>Potential adverse impacts may include scenic views which may be blocked or degraded, which may affect the attractiveness of the County for tourism. Other impacts may include light and glare. The County requires that adverse impacts are avoided or acceptably mitigated.</p> <p>Police powers of the County include protection of the environment of Inyo County, including biological and other natural resources, aesthetics, recreational attractiveness.</p> <p>The term "environment" includes the ecological, social, aesthetic and economic environment of the County. It is not limited by and may be broader than the environmental considerations under CEQA or NEPA.</p> <p>In lieu of imposing development standards set forth in Title 18 (above), the</p>	No	<p>The project would have significant and unavoidable visual impacts on scenic views within Inyo County. The project would produce an unmitigable amount of glare due to the technologies employed. Project development standards have been employed in the conditions to mitigate some of the more immediate visual impacts at the ground level but the sheer size and dominance of the power towers and the extreme brightness of the solar receivers are visually unmitigable. The visual impacts to the "environment" in this assessment have been analyzed in a broad context in response to Title 21. Condition of Certification VIS-6 would provide remedial mitigation for the loss of</p>

LORS			
Source	Policy and Strategy Description	Consistency Determination	Basis for Consistency
	County may impose such standards as are deemed appropriate and may incorporate or impose such other standards and mitigation measures as are deemed necessary.		scenic views within the County.
Clark County, Nevada			
Northwest Clark County Land Use Plan, November 7, 2007: Wilderness Areas	Three Wilderness Areas and one Wilderness Study Area are located in Northwest Clark County. These include Mount Charleston, La Madre Mountain and Rainbow Mountain Wilderness Areas and the Mount Stirling Wilderness Study Area.	Not applicable.	Mount Charleston and Mount Stirling are within the viewshed of the project area. Views of Mount Charleston and Mount Stirling within Nevada are not affected by the project in California. Views may be affected by the upgraded transmission facilities in Nevada.
Northwest Clark County Land Use Plan, November 7, 2007: Scenic Byways	Northwest Clark County has two county-designated Scenic Highways, a BLM Back Country Route and four state-designated Scenic Byways.	Not applicable.	No designated scenic highways, byways or back country routes in Clark County are in the vicinity of the proposed project site.
Clark County Chapter 30.56: Site Development Standards, Part F: Lighting Standards	Provides lighting standards that restricts height of poles to 25 feet and that all outdoor freestanding luminaries shall be hooded and directed downward. Security lighting on sensors are exempt from the standards.	Not applicable.	Generally the project is conditioned to conform to this standard by VIS-3 .
Clark County Chapter 30.68.30: Site Environmental Standards: Lighting	Lighting shall be designed to prevent light from shining directly on residential uses. All light sources shall be shielded and directed downward at all times.	Not applicable.	Generally the project is conditioned to conform to this standard by VIS-3 .
Clark County Comprehensive Plan, November 16, 2010, Volume One, Environmentally Sensitive Lands (ESL) Policy and ESL Advisory Committee Report, January 29, 2004.	Aesthetic Areas are defined in the 2004 ESL Report. These areas include Scenic Routes, Slopes of 50% or more, Significant Geologic Features and Scenic Points or Features identified in Table one of the report. There are slopes of more 50%, significant geologic	Not applicable.	There are slopes of more 50%, significant geologic features and scenic points potentially within the viewshed of the proposed project site. Generally, views of the Aesthetic Areas within Nevada are not affected by the project

LORS			
Source	Policy and Strategy Description	Consistency Determination	Basis for Consistency
	features and scenic points potentially within the viewshed of the proposed project site. The policies outlined in the Comprehensive Plan generally pertain to land use and not aesthetics.		in California. Views may be affected by the upgraded transmission facilities in Nevada.
Nye County, Nevada			
Nye County Comprehensive/Master Plan, June 7, 2011, Section 3.5.1, Solar Energy, Figures 7 and 8.	Figure 7 shows pending and approved renewable energy projects. Figure 8 shows those areas of the county best suited to solar development based upon a March 2010 analysis. ²⁴	Not applicable.	The greater Pahrump Valley is shown as “Better” for solar development, on a scale Best- Better- Good-Unsuitable. An area adjacent to Highway 160 is identified as best. This is presumably the same area identified in Figure 7 as “pending solar project”. This appears to be in the vicinity of the possible solar project listed in Visual Resources Table 5 Cumulative Impacts as Sandy Valley in Clark County..
Nye County Comprehensive/Master Plan, June 7, 2011, 6.1.7: Scenic Drives	Three scenic roads are identified on page 53: Lunar Crater Back Country Byway, The Extraterrestrial Highway and Tonopah Star Trails.	Not applicable.	None of the roads are in the proposed project vicinity.

RESPONSE TO AGENCY AND PUBLIC COMMENTS

Concern was raised about visual impacts of the very tall towers on the setting of the Old Spanish National Historic Trail by the National Trails Intermountain Region office of the National Park Service²⁵. These impacts are noted and are detailed above. Inyo County submitted comments regarding setbacks, landscaping, fencing, and an interpretive area²⁶. These comments are relevant to several technical sections. Conditions of Certification **VIS-2** and **VIS-6** reflect the comments of Inyo County as they pertain to

²⁴ Suitability Analysis for Nye County Solar Generation, Transmission and Related Support Facilities, March 2010.

²⁵ E-mail from Michael Elliott, National Trails Intermountain Region, NPS, March 21, 2012.

²⁶ Letter from Joshua Hart, Planning Director, Inyo County, March 20, 2102.

Visual Resources. Comments were received by Basin and Range Watch, including a photograph from Bonanza Peak Trail toward the project site. See **Visual Resources Figure 26** and discussion above regarding visual impacts in Nevada. Other comments received have been summarized in a Table found in **Appendix 1 – PSA Response to Comments, Visual Resources**.

STAFF’S CONCLUSIONS AND PROPOSED FINDINGS

Staff concludes that even with mitigation from recommended Conditions of Certification **VIS-1, VIS-2, VIS-3, VIS-4 VIS-5, VIS-6 and VIS-7**, the construction and operation of the Hidden Hills Solar Electric Generating Station would result in a significant, unavoidable and unmitigable aesthetic impact according to the California Environmental Quality Act (CEQA) Guidelines.

Staff recommends implementation of applicant-proposed Mitigation Measure 5b, (AFC, p. 5.13-32 to 33), which is intended to compensate for the visual clutter of the solar power towers would add to a portion of the view from Charleston View. The Applicant proposes assisting with a one-time clean-up program within the Charleston View rural residential subdivision. This clean-up program would entail the applicant making provisions to assist property owners with clean-up of their properties by providing free hauling and disposal of unwanted debris and vehicles.

Staff has reviewed **Socioeconomics Figure 1** showing the minority population is less than 50 percent within a six-mile radius of the proposed HHSEGS. The absence of an environmental justice population within that radius and, by extension, the lack of visual impacts to any environmental justice population leads Energy Commission staff to the conclusion that there are no visual resources environmental justice issues related to the construction of this project and no minority or low-income populations would be significantly or adversely impacted.

FINDINGS OF FACT

Based on the evidence, staff finds and concludes as follows:

1. The project would have a substantial adverse effect on various scenic vistas because of its vast size, height, and disruption of the existing landscape.
2. The project has BLM designated wilderness areas to the south and west of the site.
3. There are views of and from scenic resources in the vicinity of the project that would be substantially disrupted by the introduction of the project at the proposed site. Those scenic resources are the Spring Mountains National Recreation Area, the Nopah and Pahrump Valley Wilderness Areas and the Old Spanish National Historic Trail.
4. The project is not adjacent to a designated scenic highway.
5. The existing visual quality in the project area is high, and the project would degrade the existing visual character of the site and its surroundings.

6. The project's proposed construction activities would substantially degrade the existing visual character or quality of the site and its surroundings.
7. The project's temporary construction activities' impact on visual resources cannot be mitigated to less than significant impact.
8. The project area is dark at night, with little local lighting.
9. HHSEGS's new source of substantial light to nighttime views, including its aviation warning lights on the power towers, would be significant even after the effective implementation of Condition of Certification **VIS-3**.
10. The luminosity of the solar tower receivers, and their height and dominance, would be visually obtrusive for viewers, and is a significant impact that cannot be mitigated.
11. The project's potential impacts on visual resources were analyzed from seven defined key observation points (KOPs) at different locations surrounding the project site in both California and Nevada. The introduction of the project structures at six of the seven KOPs would have significant and unavoidable impacts on visual resources. These impacts would be significant and unavoidable at KOPs 1, 2, 3, 4, 5 and 7.
12. There would be no significant adverse impacts in California to visual resources resulting from the HHSEGS linears, which are located in Nevada.
13. The visual effects of HHSEGS in combination with past, present and reasonable foreseeable projects in the Pahrump Valley would be cumulatively considerable on Visual Resources in the viewshed of the greater Pahrump Valley.
14. The project would not comply with Inyo County laws, regulations and standards regarding project design, scenic views and other requirements related to Visual Resources.
15. The project is generally in compliance with applicable Nevada LORS. The Nevada LORS are not applicable to the project.

PROPOSED CONDITIONS OF CERTIFICATION

Staff proposes the following Conditions of Certification:

Surface Treatment of Project Structures and Buildings

- VIS-1** The project owner shall treat the surfaces of all project structures and buildings visible to the public such that a) their colors minimize visual intrusion by blending with the landscape or by providing architectural interest; b) their colors and finishes do not create excessive glare; and c) their colors and finishes are consistent with local policies and ordinances. Surface color treatment shall include painting or tinting of power towers, stacks, dry cooling structures, tanks, heliostat structures and other features in earth tone colors and values to blend in with the surrounding mountains and desert vegetation.

Colors shall be chosen from BLM's Standard Environmental Colors and pre-tested in the field. Any transmission line poles and conductors associated with the project in California shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive. The project owner shall submit for CPM review and approval, a specific surface treatment plan that would 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, including the photographic results of field testing;
- b.) a list of each major project structure, building, tank, pipe, and wall; and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, finish and number; or according to a universal designation system;
- c.) one set of 11" x 17" color photo simulations at life size scale of the treatment proposed for use on project structures, including structures treated during manufacture, from representative points of view, Key Observation Points 3 and 5, (Visual Resources Figure 20b and 22b of the Staff Assessment) or color-rendered elevation drawings on 18" x 24" minimum sheet size;
- d.) color samples on color card or painted steel;
- e.) a specific schedule for completion of the treatment; and
- f.) 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. Subsequent modifications to the treatment plan are prohibited without CPM approval.

Verification: At least 90 days prior to specifying to the vendor the colors and finishes of the first structures or buildings that are surface treated during manufacture, the project owner shall submit the proposed treatment plan to the CPM for review and approval and simultaneously to Inyo County for review and comment. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a plan with the specified revision(s) for review and approval by the CPM before any treatment is applied. Any modifications to the treatment plan must be submitted to the CPM for review and approval.

Prior to the start of commercial operation, the project owner shall notify the CPM that surface treatment of all listed structures and buildings has been completed and are ready for inspection and shall submit one set of electronic color photographs from the same key observation points identified in (c) above.

The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report. The report shall specify a) the condition of the surfaces of all structures and buildings at the end of the reporting year; b) maintenance activities that occurred during the reporting year; and c) the schedule of maintenance activities for the next year.

Landscape Improvements, Permanent Fencing and Screening

VIS-2 The project owner shall provide landscaping that reduces the visibility of the power plant structures and is in accordance with local policies. Trees and other vegetation shall be placed along the facility boundaries, in conformance with the Conceptual Landscape Plan, Figures VR-1a, b and c, in the 11-AFC-02 Supplement A. In addition, the project owner shall provide screening plantings along the property borders on the west and east. The objective shall be to create landscape screening of sufficient density and height to screen the power plant structures to the greatest feasible extent within the shortest feasible time from adjacent properties. Selected plants shall avoid invasive exotic species as indentified by the USDA²⁷ and Invasive Species Council of California (ISCC)²⁸. Landscape plantings and other elements must meet the requirements of the applicable General Plan and Zoning Regulations of Inyo County and any site development standards associated with those regulations.

The landscape plan shall also include the permanent perimeter fencing. All chain link or wind fencing shall include neutral-colored privacy slats to screen views of the interior. Concertina razor wire or similar security obstacles shall only be installed on the interiors of the fencing and shall not be visible from the exterior.

The project owner shall submit to the CPM for review and approval and simultaneously to Inyo County for review and comment a Landscape Documentation Package whose proper implementation will satisfy these requirements and the requirements of the Water Efficient Landscape Ordinance (WELO). The plan shall include:

- a.) a detailed Landscape Design Plan, at a reasonable scale (1"=40' maximum). The plan shall demonstrate how the requirements stated above shall be met. The plan shall provide a detailed installation schedule demonstrating installation of as much of the landscaping as early in the construction process as is feasible in coordination with project construction. The Landscape Design Plan shall include a Planting Plan with Plant List (prepared by a qualified landscape architect familiar with local growing conditions) of proposed species, specifying installation sizes, growth rates, expected time to maturity, expected size at five years and at maturity, spacing, number, availability, and a discussion of the

²⁷ NRCS Invasive Species Policy, Invasive Species Executive Order 13112, Invasive and Noxious Weeds, California State Listed Noxious Weeds.

²⁸ **The California Invasive Species List**, Presented on April 21, 2010 by the California Invasive Species Advisory Committee (CISAC) to the Invasive Species Council of California (ISCC).

suitability of the plants for the site conditions and mitigation objectives, with the objective of providing the widest possible range of species from which to choose; specifications for groundcover, top-dressing of planting areas and weed abatement measures. Existing vegetation (if any) shall be noted on the Landscape Plan. The Landscape Design Plan shall specify all materials to be used for interior roads, walks, parking areas and hardscape materials (i.e. gravel) to be placed in areas that are not paved or planted, and exterior fencing or walls.

- b.) an Irrigation Plan in compliance with the Water Efficient Landscape Ordinance. The plan shall include the following: complete Irrigation Design Plan, specifying system components and locations, and shall include the Water Efficient Landscape Worksheet.
- c.) maintenance procedures, including any needed temporary irrigation, and a plan for routine annual or semi-annual debris removal for the life of the project; and
- d.) a procedure for monitoring and replacement of unsuccessful plantings for the life of the project.

The plan shall not be implemented until the project owner receives final approval from the CPM.

Verification: The landscape plan shall be submitted to the CPM for review and approval and simultaneously to Inyo County for review and comment at least 90 days prior to installation. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM and simultaneously to Inyo County a revised plan for review and approval by the CPM. The submittal shall include 3 printed sets of full-size plans (not to exceed 24" x 36"), 3 sets of 11" x 17" reductions and a digital copy in PDF format.

Planting must occur during the first optimal planting season following site mobilization. The project owner shall simultaneously notify the CPM and Inyo County within seven days after completing installation of the landscape plan, that the site is ready for inspection. A report to the CPM describing how the completed landscape meets the conditions of VIS-2 shall be submitted in conjunction with the inspection.

The project owner shall report landscape maintenance activities, including replacement of dead or dying vegetation, for the previous year of operation in each Annual Compliance Report.

Permanent Exterior Lighting

- VIS-3** To the extent feasible, consistent with safety and security considerations, the project owner shall 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 does not cause excessive reflected glare;

- c.) direct lighting does not illuminate the nighttime sky;
- d.) illumination of the project and its immediate vicinity is minimized, and
- e.) the plan complies with local policies and ordinances.

The project owner shall submit to the CPM for review and approval and simultaneously to Inyo County for review and comment a lighting mitigation plan that includes the following:

- a.) Location and direction of light fixtures shall take the lighting mitigation requirements into account;
- b.) Lighting design shall consider setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements;
- c.) Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated;
- d.) Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the project boundary, except where necessary for security;
- e.) All lighting shall be of minimum necessary brightness consistent with operational safety and security;
- f.) Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied and
- g.) Statement of conformance with all federal, state and local statutes and regulations related to dark skies or glare, including, but not limited to, the Inyo County General Plan.

Verification: At least 90 days prior to ordering any permanent exterior lighting, the project owner shall contact the CPM to discuss the documentation required in the lighting mitigation plan. At least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and approval and simultaneously to Inyo County for review and comment a lighting mitigation plan. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a revised plan for review and approval by the CPM. The submittal shall include 3 printed sets of full-size plans (not to exceed 24" x 36"), 3 sets of 11" x 17" reductions and a digital copy in PDF format. The project owner shall not order any exterior lighting until receiving CPM approval of the lighting mitigation plan.

Prior to commercial operation, the project owner shall notify the CPM that the lighting has been completed and is ready for inspection. If after inspection the CPM notifies the project owner that modifications to the lighting are needed, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed and are ready for inspection.

Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the Compliance General Conditions including a proposal to resolve the complaint, and a schedule for implementation. The project owner shall notify the CPM within 48 hours after completing implementation of the proposal. A copy of the complaint resolution form report shall be submitted to the CPM within 30 days.

Construction Fencing

VIS-4 Unless permanent fencing and or walls are constructed at the outset of construction, the project owner shall install temporary construction fencing on the project site along Old Spanish Trail Highway in such a way as to screen views of the construction activity and equipment. The construction fencing shall meet the following requirements: chain link fence shall have a neutral-colored privacy screening of at least 75% opacity material applied to the fence to reduce or eliminate views into the project site.

Verification: At least 60 days prior to site mobilization, the project owner shall submit to the CPM a Construction Fencing Plan. The plan shall include the following: written description and photographic images of the proposed construction fencing and privacy screening material.

Construction Lighting

VIS-5 The project owner shall ensure that lighting for construction of the power plant is deployed in a manner that minimizes potential night lighting impacts, as follows:

- a.) all lighting shall be of minimum necessary brightness consistent with worker safety and security;
- b.) all fixed position lighting shall be shielded or hooded, to the extent feasible given safety and security concerns, and directed downward toward the area to be illuminated to prevent direct illumination of the night sky and direct light trespass (direct light extending outside the boundaries of the power plant site or the site of construction of ancillary facilities, including any security related boundaries); and
- c.) screening shall be provided to effectively prevent nighttime construction lighting from shining toward Charleston View; and
- d.) wherever feasible, safe and not needed for security, lighting shall be kept off when not in use.
- e.) FAA required security lighting shall be included on all construction structures per regulations.

Verification: Within seven days after the first use of construction lighting, the project owner shall notify and the CPM that the lighting is ready for inspection. If the CPM requires modifications to the lighting, within 15 days of receiving that notification the project owner shall implement the necessary modifications and notify the CPM that the modifications have been completed.

Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the General Conditions section including a proposal to resolve the complaint, and a schedule for implementation. The project owner shall notify the CPM within 48 hours after completing implementation of the proposal. A copy of the complaint resolution form report shall be included in the subsequent Monthly Compliance Report following complaint resolution.

Scenic Resources Interpretative Area

VIS-6 The project owner shall provide an Interpretive Area with parking and interpretive panels highlighting the views of wilderness areas and landforms in the project vicinity. A detailed plan shall be developed and shall include visitor interpretation of visual resource highlights which have been adversely impacted by the introduction of the project.

Verification: A conceptual plan for the Scenic Resources Interpretative Area located within the project vicinity in Inyo County shall be submitted to the CPM for review and approval within 180 days of receipt of a license to construct and operate HHSEGS. Following CPM approval of the conceptual plan, detailed plans for the interpretive area shall be submitted to the CPM for review and approval, and to Inyo County for review and comment 90 days prior to completion of the HHSEGS project. Plan details shall include:

- a.) Site plan clearly indicating primary project components and location;
- b.) Landscape plan, including visitor area surface treatments
- c.) Irrigation plan;
- d.) Parking area plan indicating lighting (if any), parking striping, ingress and egress;
- e.) Material finishes and details for all components;
- f.) Design plans for interpretive panels and displays, which take into consideration the following visual resource aspects:
 - Identification of the wilderness and national recreation areas and the major landscape features in the vicinity of the project site (i.e. wilderness areas, mountain ranges, named peaks and other landforms, including, at a minimum, Mount Charleston and the Spring Mountains, Nopah Peak and the Nopah Wilderness Area, Emigrant Pass, the South Nopah Wilderness Area and Pahrump Dry Lake). In addition to a description of the formation of these landforms and their geologic history, information shall include a discussion of the significance of these features from a Native American perspective and as landmarks and waypoints relative to the Old Spanish Trail - Mormon Ro
 - Introduction to the solar electric technology in use at HHSEGS site.
 - Pointers to the interpretive resources provided for in CUL-10.
- g.) The plan shall include a maintenance plan and schedule for the duration of the project.

If the Scenic Resources Interpretive Area is located within the project boundaries, a-b-c-d-e-f above may be incorporated into the landscape plans required in **VIS-2** and lighting plans required in **VIS-3**.

The Scenic Resources Interpretive Area shall be installed within 90 days of completion of the HHSEGS or in conjunction with landscape and lighting as required by **VIS-2** and **VIS-3** if located on the project site. The project owner shall simultaneously notify the CPM and Inyo County within seven days after completing installation of the interpretive area plan that the site is ready for inspection. A report to the CPM describing how the completed interpretive area meets the conditions of **VIS-6** shall be submitted in conjunction with the inspection.

The project owner shall report maintenance activities for the previous year of operation in each Annual Compliance Report.

Charleston View Tree Plantings

VIS-7 The project owner shall make provisions to plant trees on the properties of any Charleston View resident or property owner who indicate an interest in having them. The intent is to plant the trees in locations that will screen views looking toward the solar power towers from the residences on the property and from the property's primary outdoor living areas. This shall be available to the residents and property owners for the life of the project. The project owner shall meet the following requirements:

- a). The project owner shall employ a professional arborist to identify a list of species that are well adapted to the local conditions and which have characteristics that provide effective screening of views. Selected plants shall avoid invasive exotic species as identified by the USDA and Invasive Species Council of California (ISCC). (See **VIS-2**)
- b). The arborist shall work with residents to select up to eight trees from this list of species and will assist the residents in identifying appropriate locations for their installation. The project owner will take responsibility for purchasing and installing the trees, which shall be the equivalent of a 15-gallon standard nursery size.
- c.) Tree planting is a one-time opportunity for property owners in Charleston View. Once installed, irrigation and maintenance of the trees will be the responsibility of the property owner. Trees that do not survive transplantation within 60 days shall be replaced by the project owner at no charge to the property owner. After the 60-day period ends, the project owner shall have no further responsibility for maintenance of the trees.

Verification: Within 120 days of beginning construction, the project owner shall contact property owners in Charleston View and the CPM by registered mail to notify them of the tree planting program. The project owner shall provide in the Monthly Compliance Report a summary of the program, including the following:

- a.) parcel numbers of property owners contacted;

- b.) actions taken to ensure property owners fully understand the program;
- c.) list of installations by parcel number;
- d.) quantity and species installed on each parcel;
- e.) documentation of any property owner who declined to participate by parcel number.

REFERENCES

California Code of Regulations (CCR), Title 24, Part 2

California Department of Transportation, California Scenic Highway Program,
http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm

California Title 14-Natural Resources, Division 1.5-Department of Forestry, Chapter 7-
Fire Protection, Subchapter 2 SRA Fire Safe Regulations, Articles 1-5, September 1,
1991

California Streets and Highways Code, sections 260 through 263 – Scenic Highways

Code of Federal Regulations (CFR), 2008, Title 43, Vol. 2, Subtitle B, Part 6300,
Management of Designated Wilderness Areas

EDB 1974—Environmental Data Bank of Independence, Environmental Impact Report
Parcels 86 and 87, Pahrump Valley, California, prepared for Roland H. Wiley,
September, 1974.

Federal Aviation Administration, Obstruction Marking and Lighting Advisory Circular
AC70/7460-1K, eff. 02/01/07

Inyo County, Notice of Determination, Conditional Use Permit #2010-02/St. Therese
Mission, June 23, 2010

Inyo County, Draft Mitigated Negative Declaration of Environmental Impact and Initial
Study, Conditional Use permit #2010-02/ St. Therese Mission

INYO 2012b – Inyo County/K. Carunchio (tn: 63719) Inyo County Letter from Inyo
County regarding Preliminary Estimates for the Fiscal Impacts of the
Construction and Operation. 02/16/2012

National Park Service, National Trails Intermountain Region, letter from Michael Elliott,
Cultural Resource Specialist, March 21, 2012.

National Scenic Byway (ISTEA 1991, Title 23, section 162)

National Scenic Byways Program, <http://www.byways.org/> and
<http://www.bywaysonline.org/>

The Wilderness Act, Public Law 88-577 (16 U.S. C. 1131-1136), 88th Congress,
Second Session, September 3, 1964

APPENDIX VR-1

ENERGY COMMISSION VISUAL RESOURCE ANALYSIS EVALUATION CRITERIA

Energy Commission staff conducts a visual resource analysis according to Appendix G, “Environmental Checklist Form—Aesthetics,” California Environmental Quality Act (CEQA). The CEQA analysis requires that commission staff make a determination of impact ranging from “Adverse and Significant” to “Not Significant.”

Staff’s analysis is based on Key Observation Points or KOPs. KOPs are photographs of locations within the project area that are highly visible to the public—for example, travel routes; recreational and residential areas; and bodies of water as well as other scenic and historic resources.

Those photographs are taken to indicate existing conditions without the project and then modified to include a simulation of the project. Consequently, staff has a visual representation of the viewshed before and after a project is introduced and makes its analysis accordingly. Information about that analytical process follows.

Visual Resource Analysis Without Project

When analyzing KOPs of existing conditions without the project, staff considers the following conditions: visual quality, viewer concern, visibility, number of viewers, duration of view. Those conditions are then factored into an overall rating of viewer exposure and viewer sensitivity. Information about each condition and rating follows.

Visual Quality

An expression of the visual impression or appeal of a given landscape and the associated public value attributed to the resource. Visual quality is rated from *high* to *low*. A high rating is generally reserved for landscapes viewers might describe as picture-perfect.

Landscapes rated high generally are memorable because of the way the components combine in a visual pattern. In addition, those landscapes are free from encroaching elements, thus retaining their visual integrity. Finally, landscapes with high visual quality are visually coherent and harmonious when each element is considered as part of the whole. On the contrary, landscapes rated *low* are often dominated by visually discordant human alterations.

Viewer Concern

Viewer concern represents the reaction of a viewer to visible changes in the viewshed an area of land visible from a fixed vantage point. For example, viewers have a high expectation for views formally designated as a scenic area or travel corridor as well as for recreational and residential areas. Viewers generally expect that those views would be preserved. Travelers on highways and roads, including those in agricultural areas, are generally considered to have moderate viewer concerns and expectations.

However, viewers tend to have low-to-moderate viewer concern when viewing commercial buildings. And industrial uses typically have the lowest viewer concern. Regardless, the level of concern could be lower if the existing landscape contains discordant elements. In addition, some areas of lower visual quality and degraded visual character may contain particular views of substantially higher visual quality or interest to the public.

Visibility

Visibility is a measure of how well an object can be seen. Visibility depends on the angle or direction of views; extent of visual screening; and topographical relationships between the object and existing homes, streets, or parks. In that sense, visibility is determined by considering any and all obstructions that may be in the sightline—trees and other vegetation; buildings; transmission poles or towers; general air quality conditions such as haze; and general weather conditions such as fog.

Number of Viewers

Number of viewers is a measure of the number of viewers per day who would have a view of the proposed project. *Number of viewers* is organized into the following categories: residential according to the number of residences; motorist according to the number of vehicles; and recreationists.

Duration of View

Duration of view is the amount of time to view the site. For example, a high or extended view of a project site is one reached across a distance in two minutes or longer. In contrast, a low or brief duration of view is reached in a short amount of time—generally less than ten seconds.

Viewer Exposure

Viewer exposure is a function of three elements previously listed, *visibility*, *number of viewers*, and *duration of view*. Viewer exposure can range from a *low* to *high*. A partially obscured and brief background view for a few motorists represents a low value; and unobstructed foreground view from a large number of residences represents a high value.

Visual Sensitivity

Visual sensitivity is comprised of three elements previous listed, *visual quality*, *viewer concern*, and *viewer exposure*. Viewer sensitivity tends to be higher for homeowners or people driving for pleasure or engaged in recreational activities and lower for people driving to and from work or as part of their work.

Visual Resource Analysis with Project

Visual resource analyses with photographic simulations of the project involve the elements of contrast, dominance, view disruption, and visual change. Information about each element follows.

Contrast

Contrast concerns the degree to which a project's visual characteristics or elements — form, line, color, and texture — differ from the same visual elements in the existing landscape. The degree of contrast can range from *low* to *high*. A landscape with forms, lines, colors, and textures similar to those of a proposed energy facility is more visually absorbent; that is, more capable of accepting those characteristics than a landscape in which those elements are absent. Generally, visual absorption is inversely proportional to visual contrast.

Dominance

Dominance is a measure of (a) the proportion of the total field of view occupied by the field; (b) a feature's apparent size relative to other visible landscape features; and (c) the conspicuousness of the feature due to its location in the view.

A feature's level of dominance is lower in a panoramic setting than in an enclosed setting with a focus on the feature itself. A feature's level of dominance is higher if it is (1) near the center of the view; (2) elevated relative to the viewer; or (3) has the sky as a backdrop. As the distance between a viewer and a feature increases, its apparent size decreases; and consequently, its dominance decreases. The level of dominance ranges from *low* to *high*.

View Disruption

The extent to which any previously visible landscape features are blocked from view constitutes view disruption. The view is also disrupted when the continuity of the view is interrupted. When considering a project's features, higher quality landscape features can be disrupted by lower quality project features, thus resulting in adverse visual impacts. The degree of view disruption can range from *none* to *high*.

Visual Change

Visual change is a function of *contrast*, *dominance*, and *view disruption*. Generally, *contrast* and *dominance* contribute more to the degree of visual change than does *view disruption*.

APPENDIX VR-2

VISUAL RESOURCE GLINT AND GLARE IMPACT ASSESSMENT

Gregg Irvin, Ph.D.

INTRODUCTION

The Hidden Hills Solar Electric Generating System (HHSGS) would be located on Old Spanish Highway, near the community of Charleston View and be would be located on approximately 3,277 acres (5.12 square miles) of privately owned land in Inyo County, California, adjacent to the Nevada border. The project site is approximately 18 miles south of Pahrump, Nevada, and approximately 45 miles west of Las Vegas, Nevada.

Each solar plant would use heliostats which are elevated mirrors guided by a tracking system mounted on a pylon to focus the sun's rays on a solar receiver steam generator (SRSG) atop a 750-foot tall solar power tower near the center of each solar field. In each solar plant, one Rankine-cycle steam turbine would receive steam from the SRSG (or solar boiler) to generate electricity. The solar field and power generation equipment would start each morning after sunrise and, unless augmented, would shut down when insolation^[1] drops below the level required keeping the turbine online.

Each of the heliostat assemblies would be composed of two mirrors, each approximately 12 feet high by 8.5 feet wide with a total reflecting surface of 204.7 square feet. Each heliostat assembly would be mounted on a single pylon, along with a computer-programmed aiming control system that directs the motion of the heliostat to track the movement of the sun. The solar field for each solar plant would consist of approximately 85,000 heliostats.

ANALYSIS AND CONCLUSIONS

HELIOSTATS

Energy Commission staff has determined that the potential for a significant impact on Visual Resources from heliostat reflections would not exist for both ground based observers and airborne observers outside of the boundaries of the solar field project site during daytime conditions.

For ground-based observers the applicant has demonstrated through modeling that heliostat retinal irradiance and beam intensity (under worst case conditions) is eye safe. The heliostats are designed to reflect sunlight toward the solar receiver steam generator (SRSG) at the top of the tower and are programmed such that reflectivity would never be directed toward ground level viewers located outside of the project site. Locations on the ground outside the footprint of the plant will not receive any direct reflections of sunlight.

^[1] Defined as "exposure to the sun's rays."

The effective implementation of traffic and transportation's recommended Condition of Certification **TRANS-9**, Heliostat Operations Positioning and Monitoring Plan (HPMP), will insure that significant precautionary measures have been applied to the planned heliostat control algorithms to reduce the probability of direct solar heliostat reflections to ground observers outside the boundaries of the solar field project site to a functional value of zero.

For airborne observers, i.e., pilots and passengers in aircraft in the surrounding airspace, there is the distinct potential (if not inevitable) for direct solar reflections from the heliostats. Only the population of heliostats which are in the standby position or in transit to a new position will have the potential to produce direct solar reflections on airborne observers. The irradiance of the heliostat reflections into the airspace will not exceed solar radiation concentrations above that of direct sunlight. Further, the exposure effect in producing a deleterious impact on the visual appearance of the project site will diminish as a function of distance from the heliostat field. The heliostat mirrors although planar (flat) are tensioned in their pylon mountings when installed to produce a slight concavity. This produces a slight focusing effect to improve the amount of solar energy received at the SRGS from each heliostat which will diverge beyond the standby ring range. Because of this divergence of the reflected light, the appearance to an airborne observer would not be that of a direct solar reflection (specular in appearance) but rather would appear as a diffuse and less bright source. Further, the appearance would become more and more visually diffuse and dimmer as a function of increasing distance/ altitude.

Transient exposure to divergent heliostat solar reflections will occur for airborne observers at certain geometries with respect to the solar field project site. Further such exposures will be relatively low in their probability of occurrence, and when present will be very transient in duration. Thus, any exposures will be brief and intermittent since the aircraft will be in motion with respect to the heliostats. Additionally, a sequence of multiple exposures from different heliostat reflections (a blinking effect as the aircraft passes through a sequence of heliostat beams) is possible for certain flight geometries.

The impact of heliostat reflections in producing glint and/or glare for airborne observers that would adversely affect the daytime view of the project and the surrounding area is considered as potentially moderate in effect but less than significant.

Once the project becomes operational, the visual impact of airborne exposure to diffuse heliostat solar reflections is unmitigable and therefore the probability of occurrence must be minimized. The effective implementation of staff-recommended Condition of Certification **TRANS-9**, Heliostat Operations Positioning and Monitoring Plan (HPMP), will insure that significant precautionary measures have been applied to the planned heliostat control algorithms to reduce the probability of diffuse solar heliostat reflections to airborne observers to the minimum extent possible.

SOLAR RECEIVER STEAM GENERATORS (SRSG):

The SRSG on the solar power towers will produce a sustained bright source of reflected light from the heliostats during daytime operations. Since the SRSGs are 'circular' (wrapping around the tower 360 degrees) and near the tower peak they will be highly visible from most vantage points and for many miles. Both ground-based and airborne

observers outside of the boundaries of the solar field project site will experience similar levels of perceived brightness. There is no doubt that the illuminated tower SRSGs will produce a most prominent and sustained visual signature during operations. The issue from a Visual Resources perspective is will the SRSGs produce sufficient glare and/or excessive perceived brightness to adversely affect the daytime views in the area. This is an essential question since there are essentially no realistic mitigating procedures for the tower SRSG luminance levels. Further, since the SRSGs are reflecting the heliostat solar reflections (i.e., the SRSGs are not an emitting light source) the apparent brightness will remain fairly constant over large changes in the viewing distance.

Although during nominal operations the SRSGs are approximately 3,000 times less luminous than the Sun, they are on the order of 80-90 times more luminous than the background sky. In terms of perceived brightness, the SRSGs are anticipated to appear at least 5 times brighter than the background sky. At these stated luminance levels and perceived brightness levels there would be some constant level of moderate glare. The principal anticipated project visual impact would result from glare of the SRSGs. As discussed in detail in the **Traffic and Transportation section, Appendix TT1 – Glint and Glare Safety Impact Assessment**, the SRSGs would comprise 130-foot-tall structures at the tops of the two 750-foot tall solar towers. The SRSGs would collect reflected energy from the project heliostat fields, resulting in extremely high temperatures and generation of bright illumination. As a result, the SRSGs would become intensely bright light sources, calculated by staff to have luminance on the order of 230,000 candelas (cd/m^2)

This level of luminance would be 32 times more luminous than the desert sky and be perceived as intensely bright to considerable distances. Noting that no such light source of spatial extent and luminance has been known to exist previously and therefore extensive data are nonexistent, staff estimates that the SRSGs would appear very bright to a distance of approximately 17 miles, and would potentially constitute a significantly disruptive source of discomfort glare to viewing distances of approximately 8.5 miles. At that distance the SRSGs would have a visual size of $1/6$ degree (10 min arc), approximately $1/3$ the size of the sun ($1/2$ degree or 30min arc). At 2.8 miles, the SRSGs would have the same visual size as the sun. Although the SRSGs would not be as bright as the sun, which is capable of causing physical damage to the eyes, the SRSGs would be exceptionally bright and be nearly constant in perceived brightness out to the 8.5 mile viewing distance. Beyond this distance perceived brightness would progressively decrease until perceived brightness becomes proportional to distance (log linear, Stevens' Power Law) at a visual subtense of approximately 5 min arc ($1/12$ deg) as size begins to transition to the limits of visual acuity.

This condition is met at a viewing distance of 16.9 miles. Up to this viewing distance of approximately 8.5 miles from the SRSGs, the glare from this level of brightness, being produced by a spatially extended source of $230,000 \text{ cd}/\text{m}^2$ under nominal power generation conditions, would produce discomfort glare and visual disruption effects. Within this 8.5 mile radius, SRSG glare has also been considered to constitute strong contrast in the analysis of impacts under CEQA Criterion C.

Beyond an 8.5 mile viewing distance the SRSGs are still considered as a bright source in the visual field but, as a source of glare, and hence as visual disruption effects, would

be less disruptive than inside the 8.5 mile viewing distance. Importantly, the perceived brightness and glare effects from the SRSGs are not considered as visually disabling at any viewing distance.

When combined with the additional visual signature of the 'tee pee' effect produced during conditions of high humidity or elevated levels of suspended airborne particulate, the overall visual signature and its prominence are substantially increased. Under these conditions, rather than the SRSGs in isolation producing the visual signature, the tower plus the enormous volume of the conic shaped 'tee-pee' visual signature will be present. Staff also concludes that the large visual extent, brightness and prominence of the overall visual signature of the tower area during these conditions creates an adverse impact in the daytime view within the viewing area.

Staff concurs with the visual resource analysis that the impacts of the visual change of the project will be significant and unavoidable with respect to visual quality at 6 of 7 KOPs. It is the magnitude of the visual impact that is the essential basis for concluding the significance of the adverse affect on the daytime view in the area. Once the project becomes operational, the visual impact of the SRSGs solar reflections is unmitigable.

FINDINGS OF FACT

Based on the evidence, staff finds and concludes as follows:

1. There will be no significant adverse impacts from heliostat reflections for both ground-based and airborne observers outside of the boundaries of the solar field project site during daytime conditions.
2. The visual impact of the Solar Receiver Steam Generators (SRSG) during power generation on visual resources is both significant and incapable of mitigation.

CONCLUSIONS OF LAW

Implementation of the Conditions of Certification for Traffic and Transportation, **TRANS-9**, Heliostat Operations Positioning and Monitoring Plan, will facilitate reducing the impact of heliostat reflections on visual resources to a minimum.

VISUAL RESOURCES

List of Comment Letters

		Visual Resources Comments?
1	Inyo County	X
2	Bureau of Land Management	
3	National Park Service	
4	The Nature Conservancy	
5	Amargosa Conservancy	X
6	Basin & Range Watch	X
7	Pahrump Paiute Tribe	X
8	Richard Arnold, Pahrump Paiute Tribe	
9	Big Pine Tribe of Owens Valley	
10	Intervener Cindy MacDonald	X
11	Intervener Center for Biological Diversity	
12	Intervener, Old Spanish Trail Association	
13	Applicant, BrightSource Energy, Inc.	X

Comment #	DATE	COMMENT TOPIC	RESPONSE
1	July 17, 2012	Inyo County	
1.2		Title 21- The County believes the idea of an Interpretive Center is a good start but under Title 21 additional mitigation aimed at reducing or offsetting the impacts to local residents is required. To that end, Resolution 2012-29 requires the construction of a community center.	Comment noted. Not required for Visual mitigation.
1.66		COC- The Applicant /owner shall provide a community center with parking lot.	Comment noted. Not required for Visual mitigation.

Appendix 1 -- PSA Response to Comments, Visual Resources

1.75a		Policy LU-1.14 (1.15) Buffers	Included in FSA LORS Tables 2 and 6. VIS-2 includes perimeter screening.
1.86a		Goal VIS-1.1 Historical Character	Included in FSA LORS Tables 2 and 6. VIS-6 partially mitigates for loss of scenic views.
Comment #	DATE	COMMENT TOPIC	RESPONSE
5	July 21, 2012	The Amargosa Conservancy	
5.9		Night-Lighted Towers will be ever-apparent and destroy dark sky views	Towers will not be lit at night; only FAA lighting will be in use.
Comment #	DATE	COMMENT TOPIC	RESPONSE
6	July 23, 2012	Basin and Range Watch	
6.10		BLM VRM Class 1 Review	See Figures VR-3 & 4 and discussion in Regional Setting.
6.11		More KOPs at higher elevations	KOPs are based on factors which preclude some locations.
6.12		KOPs at high elevations in Spring Mountains National Recreation Area.	Staff has created a draft simulation for FSA, VR Figure 26.

Appendix 1 -- PSA Response to Comments, Visual Resources

6.13		KOPs at elevations showing flash glare	Staff has created a draft simulation for FSA, VR Figure 26.
6.14		Flash Glare Events	Staff found no adverse impacts. See TRANS-9 .
6.15		More KOPs at Stump Springs	Impacts were found to be significant at KOP 2.
6.16		Mitigation with Trees at Stump Springs	No feasible mitigation for KOP 2.
6.17		Visitor Center Hiding Facility	Scenic Resources Interpretive Area not intended to hide project facilities.
6.18a		KOPs at 5000 ft. in Nopah Range	KOPs are based on factors which preclude some locations.
6.18b		KOPs from High Elevations in Spring Mtns	Staff has created a draft simulation for FSA, VR Figure 26.

Appendix 1 -- PSA Response to Comments, Visual Resources

6.18c		Dark Sky & Night Lighting Simulations	VIS-3 and VIS-5 provide mitigation for lighting.
6.18d		More KOPs from Stump Springs	KOPs are based on factors which preclude some locations.
6.18e		Multiple Simulations of Flash Glare	Staff has created a draft simulation for FSA, VR Figure 26.
6.18f		Simulations of Construction Dust Plumes	Dust from construction activity is temporary. See Air Quality section.
6.18g		KOP of Dying Vegetation at Stump Springs Due to Water Drawdown.	KOPs are based on factors which preclude some locations.
Comment #	DATE	COMMENT TOPIC	RESPONSE
7	July 23, 2012	Pahrump Paiute Tribe	
7.1		Significant Impacts to Visual Landscape	Staff finds significant and adverse impacts at 6 of 7 KOPs.

Appendix 1 -- PSA Response to Comments, Visual Resources

Comment #	DATE	COMMENT TOPIC	RESPONSE
10	July 21, 2012	Intervener Cindy MacDonald -- pg. 17-1	
10.1		Since heliostats will be in the "safe position" at night (horizontal), what is the projected increase and/or magnification of light pollution in the area during times of full moons and how far will this illumination extend throughout the Pahrump Valley?	Lighting is only in evening for periodic washing of heliostats.
10.2		Will there be any visual "glow" from the power towers if the plant is operational after the sun sets? If so, what will it look like, what magnitude would it be, how far away will it be visually "disruptive" across the landscape and how long will this extend throughout the night?	Visual glow will subside at sundown...no night time glow from towers or heliostats would occur. Please see Facility Design for further discussion.
10.3		What are the visual resource category for the BLM land in California that surround the proposed project site?	See Figures VR-3 & 4 and discussion in Regional Setting.
10.4		Are there other ways that the applicant can "screen" the perimeter besides trees or other vegetation that won't be an attractant to birds, insects or other wildlife?	Fencing is provided for in VIS-2 and provides some screening other than with plants.
10.5		Approximately how many of these non-native trees would be required to screen the perimeter and what would be their annual water requirements over the life of the project?	Landscape plans are submitted during compliance phase and water use will be calculated under the Water Efficient Landscape Ordinance. See VIS-2 .
10.6		If native soils cause heliostats to shift, sink and/or collapse due to soil saturation, how will the applicant control glint and glare and prevent adverse visual effects?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.
10.7		Is there any way through modeling to predict the worst-case scenario of the number of heliostat/mirror structures that could shift, sink and/or collapse due to soil saturation?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.

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10.8		Is the computer software that will control the heliostat/mirror assemblies capable of accounting for and/or adjusting heliostat/mirror assemblies in the event of they shift, sink and/or collapse?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.
10.9		What are the potential adverse visual affects from glint and glare as a result of broken mirrors contained within the heliostat/mirror assemblies?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.
10.10		Is there anyway to predict the degree of broken mirrors in the heliostat/mirror assemblies during normal operations?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.
10.11		Does the computer software have the ability to control glint and glare positioning in the event mirrors in the heliostat/mirror assemblies are broken?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.
10.12		What are the visual effects of broken mirrors and/or mirror shards that are littered on the ground? Obviously, if mirror shards fall straight down and lie flat on the ground, it would only be aesthetically displeasing. However, if they don't lie flat and lodge themselves at angles, what are the visual impacts and can they affect public safety by impacting motorists on the nearby Old Spanish Trail Highway?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.
10.13		In the event a "catastrophic" storm event dislodges tens of thousands of mirrors, what would be the potential adverse impacts with respect to glint and glare from the broken and displaced mirrors?	Perimeter screening/fencing reduces the visual impacts.

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10.12		Due to high level wind events and “gusts” known to occur in the area, what are the potential impacts of glint and glare resulting from broken mirrors, mirror fragments and mirror shards due to wind damage?	Refer to TRANS-9 and related analysis in TRANS & VR App. 2.
Comment #	DATE	COMMENT TOPIC	RESPONSE
13	July 23, 2012	BrightSource Energy, Inc.	
13.12		<p>Page 4.13-3, Regional Setting, 3rd paragraph: The PSA states: “Visual Resources Figure 1 shows the relationship between the proposed project site and the wilderness and recreation areas described above and the national historic trail in the area. Figure 1 clearly shows the ‘bowl’ whose bottom is the project site and whose sides are made up of areas of high scenic quality. It is this high-quality scenic landscape which is the backdrop for the proposed industrial-scale development of HHSEGS.” Figure 1 does not document the scenic quality of the project area landscape. Figure 1 only depicts roads, communities, jurisdictional boundaries, and the boundaries of designated wilderness and recreational areas, but does not identify scenic qualities of the landscape; therefore, “high quality scenic landscape” is an unwarranted conclusion to be drawn from this figure and it is not supported by substantial evidence. In addition, Figure 1 shows regional uses outside the viewshed of the project. For visual resource analysis purposes, areas outside the viewshed are irrelevant. “Industrial-scale” is a subjective and undefined term, which biases the PSA’s analysis. The project is large-scale, but if it is to be compared to industry, the PSA should explain which “industry.”</p>	<p>Wilderness Areas, National Forest and Recreation Areas are by their very nature areas of high scenic quality. The conclusions drawn by staff in this paragraph are supported by Visual Resources Figures 1 2, 3 and 4. "Industrial-scale" and likewise, "utility scale", are terms used in various media to describe large solar power generating facilities.</p>

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<p align="center">13.13</p>		<p>Page 4.13-3, Regional Setting, 4th paragraph: The PSA states: "The proposed project site is privately-owned land located in an area where most of the land is publicly-owned or managed by the Bureau of Land Management (BLM). The BLM lands surrounding the project site have been inventoried by the respective California and Nevada BLM field offices and both Visual Resource Inventory (VRI) and Visual Resource Management (VRM) classes have been applied." The accuracy of the above statements depends on the definition of the phrase "the area." The viewshed? The region outside the viewshed? The foreground, middleground, or background? It would be more accurate to state that "The proposed project site is privately-owned land. The land immediately adjacent to the project is privately owned land and BLM land. The land in middleground and background views of the project is a mix of BLM and private land." The project site, which is a triangular shape is bounded by BLM lands on one side. BLM lands do not "surround" the project site. A mix of BLM and private lands surround the Charleston View area.</p>	<p>The areas around the project site owned and managed by BLM referring to the area depicted in Figures 3 and 4. Staff has characterized it accurately as an area where most of the land is managed by BLM.</p>
<p align="center">13.14</p>		<p>Page 4.13-4, Regional Setting, 3rd full paragraph: The PSA states: "Visual Resources Figure 3 shows the Visual Resource Inventory Classes for the BLM lands in the vicinity of the project area. Nearly 50 percent of the land shown in Figure 3 is Class I, areas of the highest scenic quality and viewer sensitivity. These Class I areas extend beyond the boundaries of the wilderness areas. The Class II areas are seen in both mountains and valleys adjacent to Class I areas and on the Pahrump Valley floor. Class III areas appear to be the smallest component of the areas shown in the figure. Class IV are found mostly in the Pahrump Valley. The figure demonstrates that, according to the BLM rating system, there is a generally a high degree of scenic quality in the vicinity of the project site."</p>	<p>Staff disagrees with the applicant's analysis of Figure 3.</p>

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<p align="center">13.15</p>		<p>Page 4.13-4, Regional Setting, 4th full paragraph: The PSA states: “Visual Resources Figure 4 shows the VRM classes assigned to the area in the most recent RMP. Note the significant migration of Class I areas to Class II, III and IV, and the significant downgrade of the valley floor and alluvial fans to Class III and IV. The only remaining Class I designations are the Nopah and Pahrump Valley Wilderness Areas. The two figures clearly illustrate the high degree of scenic quality that exists with the viewshed of the proposed project site.” This statement is not supported by Visual Resource Figure 4. The Visual Resource Management classes shown on Visual Resource Figure 4 are not indicators of visual quality, but are rather indicators of the policy decisions BLM has made in developing its Resource Management Plan about how much visual change it has decided it will permit in specific areas. What Figure 4 shows is that the areas to the southeast, south, and west of the project site are private lands that are not under BLM jurisdiction, and where no visual resource management objectives have been assigned.</p>	<p>Policy decisions in the RMP allowed for more visual change to the landscape in areas where it was inventoried as Class I or II, the highest visual quality landscapes.</p>
<p align="center">13.16</p>		<p>Page 4.13-11, Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 1 – Policy and Strategy Description: The PSA states: “The proposed project would be located in parcels currently designated as REC, Resort/Recreational and OSR, Open Space and Recreation.” This is not correct. See Land Use section.</p>	<p>Removed from LORS Tables as it does not apply to Visual Resources.</p>
<p align="center">13.17</p>		<p>Page 4.13-11, Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 2 – Policy and Strategy Description: The PSA states: “The County shall require landscaping to screen industrial uses.” It is not clear that the County considers this an “industrial” use.</p>	<p>Industrial uses generally include power plants.</p>

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<p align="center">13.18</p>		<p>Page 4.13-11 Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 3 – Policy and Strategy Description: The PSA states: “The County shall require undergrounding of utility lines in new development areas...except where feasible for operational or financial reasons. Additional implementation measures are found in Table 4-4, page 4-44.”It is not clear that this is considered to be a “new development area.” This area has been subdivided and under development for decades.</p>	<p>Underground utility lines are preferred by the County.</p>
<p align="center">13.19</p>		<p>Page 4.13-11, Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 4 – Policy and Strategy Description: The PSA states: “The County shall promote efficient water use by encouraging and enforcing water-conserving landscaping and other measures.” This is not a Visual Resource LORS, although it mentions landscaping.</p>	<p>Landscape plans are reviewed by Visual Resources staff and submitted during compliance phase and are expected to comply with LORS. Visual Resources staff suggests the VR COCs that deal with landscape plans.</p>
<p align="center">13.20</p>		<p>Page 4.13-11, Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 7 – Policy and Strategy Description: The PSA states: “The County shall consider the visual and environmental impacts associated with placement of regional conveyance corridors. Table 7-7, page 7-33, lists implementation measures.” What is a conveyance corridor? Does the project propose one in the County?</p>	<p>Conveyance corridors refer to Canals, Pipelines and Transmission Cables, as stated in the Policy 7.8 heading.</p>
<p align="center">13.21</p>		<p>Page 4.13-12, Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 10 – Policy and Strategy Description: The PSA states: “Within communities, building equipment shall be screened from public view.” It is not clear that the Project is proposed “within a community” as that term is used in the ordinance.</p>	<p>Charleston View is a defined community in the Inyo County General Plan.</p>

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<p align="center">13.22</p>		<p>Page 4.13-12, Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 13 – Policy and Strategy Description: The PSA states: “Maximum height of buildings in OS Zone: Principal buildings 30 feet, accessory buildings 25 feet.” This is not a Visual Resource LORS any more than other zoning code provisions that address the dimension, location, or appearance of structures.</p>	<p>Removed from LORS Tables as it does not apply to Visual Resources.</p>
<p align="center">13.23</p>		<p>Page 4.13-12, Visual Resources Table 2 (Applicable Laws, Ordinances, Regulations, and Standards), LOCAL, Row 14 – Policy and Strategy Description, 1st bullet: The PSA states: “Potential adverse impacts may include scenic views which may be blocked or degraded, which may affect the attractiveness of the County for tourism. Other impacts may include light and glare. The County requires that adverse impacts are avoided or acceptably mitigated.” This is not an Applicable LORS. This is a declaration in the ordinance, but not adopted as part of the County code.</p>	<p>Staff disagrees with applicant's assertion that the ordinance does not apply.</p>
<p align="center">13.24</p>		<p>Page 4.13-15 A. Scenic Vista, 1st paragraph: The PSA states: “For the purposes of this analysis, a scenic vista is defined as a distant view of high pictorial quality perceived through and along a corridor or opening, or from a designated scenic area.” This is a novel definition. The question should be, according to the CEQA guidelines: Is the project site located in a <i>designated</i> scenic vista, or has the County designated the project site as an important visual resource?</p>	<p>The CEQA checklist is a starting point, not an end point, and additional questions may be asked relevant to the project being analyzed. Staff maintains that views "from" a scenic resource, in this case Wilderness Areas, National Recreation Areas and National Historic Trails, are highly relevant to the visual resource analysis of this project. See also Ivanpah Solar Electric Generating Systems Final Decision, Findings of Fact, No. 7, page 28.</p>

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<p align="center">13.25</p>		<p>Page 4.13- 15 A. Scenic Vista, 2nd paragraph: The PSA states: “Yes. As seen in Visual Resources Figures 1 and 3, the project is surrounded by identified areas of high scenic value.” An “identified area of high scenic value” is not a designated scenic vista.</p>	<p>Wilderness Areas, National Forest and Recreation Areas are by their very nature areas of high scenic quality.</p>
<p align="center">13.26</p>		<p>Page 4.13- 15 A. Scenic Vista, 2nd paragraph: The PSA states: “Views of the Nopah Range and Wilderness Area, Kingston Range and Pahrump Valley Wilderness Area and Spring Mountains National Recreation Area, including the prominent Mt. Charleston, would all be significantly and adversely impacted by the project.” A mere view of a mountain range is not a designated scenic vista. Moreover, there is no evidence to support this sweeping assertion. From which KOP in California does the project “significantly and adversely” impact a designated scenic viewpoint? Wilderness status protects the land that lies within the boundaries of the wilderness area, but there is no legal basis for presuming that this status provides for special treatment for views <i>toward</i> the wilderness area from locations outside of it.</p>	<p>See 13.25 above. Views of the Wilderness Areas, National Recreation Areas and Mount Charleston are impacted at KOPs 3, 4, 5 and 7.</p>
<p align="center">13.27</p>		<p>Page 4.13 15 A. Scenic Vista, 2nd paragraph: The PSA states: “As described earlier, these areas were inventoried by the BLM as Classification 1, the highest scenic value that can be assigned. Views from these scenic resources will also</p>	<p>The applicant has misunderstood the reference to VRI Classification (Inventory) as VRM.</p>

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<p align="center">13.28</p>		<p>Page 4.13 15 A. Scenic Vista, 2nd paragraph: “as will some views from alignments of the Mormon and Old Spanish National Historic Trails.” These “alignments” are not designated scenic vistas. An “alignment” is not a viewer. The relevant question is whether there are a significant number of viewers who are even aware of the alignment, if they will be present along this alignment, whether the project is visible from the alignment, and if so, how the views will be impacted</p>	<p>Number of viewers on the National Historic Trail alignment is unknown. Nevertheless, the views from the trail, whether viewers are motorists or on foot or horseback, will be impacted in a significant way, as seen in KOP 7.</p>
<p align="center">13.29</p>		<p>Page 4.13 15 A. Scenic Vista, 3rd paragraph: The PSA states: “KOPs 5 and 7 clearly show the impact of the project on the existing scenic view of Mt. Charleston, a prominent landmark of importance in pre history and current times.” On the contrary, these simulations make it clear that in these views, the project will not block or otherwise interfere with views toward Mount Charleston’s peak or ridgeline. These KOPs are neither designated scenic vistas nor scenic roads. It is a mistake to equate a mere “visual disturbance” on a scenic view with a “substantial adverse effect” on a designated scenic vista.</p>	<p>KOPs 5 and 7 were chosen in consultation with Visual Resources staff (4-27-2011) to represent the views from the Nopah Wilderness Area and the Old Spanish National Historic Trail, in addition to the views of motorists or others.</p>

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<p align="center">13.30</p>		<p>Page 4.13-15 A. Scenic Vista, 4th paragraph: The PSA states: "KOP 3 manifests the negative impact of the project on the motorists' view of the highly scenic Nopah Range and Wilderness Area." The roadway from which this view is seen is not a designated scenic highway and does not qualify as a scenic vista. In addition, the standard for a finding of significant impact is substantial adverse impact, not negative impact. Comparison of the existing view with the simulation of the view as it would appear with the project in place indicates that the current view already contains modifications, and that the visual changes brought about by the project would not constitute a "substantial degradation."</p>	<p align="center">Language changed to adverse.</p>
<p align="center">13.31</p>		<p>Page 4.13-16 Project Site and Construction Laydown Area: The PSA states: "Construction activities at the project site and construction laydown area would substantially degrade the visual character or quality of the site and surrounding areas as viewed from KOPs 3, 4, 5 and 7, due in large part to the construction of the power towers." Construction activities are temporary. Can temporary impacts be substantial? If it has low visibility, see below, how does it substantially degrade the site?</p>	<p>Construction activities at the project site and construction laydown area would substantially degrade the visual character or quality of the site and surrounding areas as viewed from KOPs 3, 4, 5 and 7, due in large part to the construction of the power towers.</p>

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<p align="center">13.32</p>		<p>Page 4.13-16 Project Site and Construction Laydown Area, 4th paragraph: "Construction-related truck traffic would be entering and leaving the project by way of what is now known as Topaz Street, at the westernmost boundary of the project site, and would introduce activity into the views not currently seen. The laydown area, where much of the storage and assembly would occur, is approximately one mile north of Old Spanish Trail Highway, and therefore would have low visibility from KOP 3 and the road. The construction of the power towers will be highly visible from all vantage points and therefore produce the most significant visual impact of the project." There is no KOP here. There is no assessment of the visual quality. The only activity is traffic, which already occurs at this location. Traffic does not constitute a "substantial degradation" of the visual quality of the site. Subject characterizations of visual impacts, such as this, which are not supported by a KOP analysis, should be deleted.</p>	<p>Staff disagrees with applicant's assertion that construction traffic and construction of a 750' power tower does not constitute a substantial degradation of the visual quality.</p>
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<p align="center">13.33</p>		<p>Page 4.13-16 and 17, Light or Glare, 1st paragraph: The PSA states: "Nighttime construction and security lighting would have the potential to produce glare or off-site light trespass. If bright exterior lights were not shielded or directed onsite, they could introduce significant light or glare to the vicinity, particularly for motorists on Old Spanish Trail Highway, as represented by KOP 3 and 5. This has the potential to cause distraction in the form of glare and confusion as to the light source origin for motorists, who are used to travelling along a fairly dark stretch of highway. Depending upon the project setbacks, without screening and lighting controls, the impact upon motorists on Old Spanish Trail Highway would be adverse and significant." The Staff Analysis should analyze the project as proposed. It is legally inappropriate to analyze the project without screening and lighting controls, when these features are proposed as part of the project. As a prelude to this discussion, there needs to be a clear statement of the kinds of nighttime lighting that will be installed at the site during the construction period and the extent to which it will be used. There will also be lighting at the laydown area and the heliostat construction area that will be on at night. The AFC analysis provides correct assessment of the impacts of the lighting at laydown and heliostat construction areas, which will be controlled and shielded, and which will be far from offsite viewers and screened to some degree by intervening desert vegetation.</p>	<p>Staff has analyzed the project as proposed. This is standard Energy Commission language. Applicant –proposed mitigation measures do not address nighttime construction lighting. (5.13-32). The FSA includes more direct language about mitigation for nighttime construction lighting.</p>
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<p align="center">13.34</p>		<p>Page 4.13-16 and 17, Light or Glare, 1st paragraph: The PSA states: “As the power towers are constructed, aviation safety lighting would need to be operational as the towers reach each successive level of lighting required by the FAA. In addition, cranes used in the project construction would also require aviation safety lighting.” All true, but the cranes are temporary and not a distraction for motorists at distances of several miles.</p>	<p>Staff notes that Ivanpah Solar Electric Generating System (ISEGS), a power tower technology system previously analyzed and licensed by the Energy Commission, required FAA lighting. The FSA acknowledged the existence of FAA lighting during the operational phase and that staff was unaware of any thresholds for significance for FAA lighting. Staff determined for ISEGS that with all the other lighting controls in place, the FAA lighting would not likely constitute a significant impact. The Final Decision made Findings that the ISEGS nighttime lighting would be less than significant with implementation of the COC VIS-4. The ISEGS differs substantially from HHSEGS, however, in the height of the proposed towers and in the distance from the nearest residences or motorists. Therefore, the number of FAA lights and the proximity to sensitive viewers is greater for the HHSEGS project and constitutes an adverse impact.</p>
<p align="center">13.35</p>		<p>Page 14.13-17, Light or Glare, 1st full paragraph: The PSA states: “The construction lighting and activity have the potential to create significant and unavoidable visual impacts on residents, motorists and other viewers.” What other viewers? From which KOPs?</p>	<p>See previous paragraph in staff’s PSA referencing KOPs 3 and 5.</p>

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<p align="center">13.36</p>		<p>Page 14.13-17, Light or Glare, 1st full paragraph: The PSA states: "There is no mitigation for reducing the visual impact of the construction and lighting of the power towers, and would remain a significant and unavoidable visual effect." The lighting associated with the construction of the power towers will be temporary and short-term in nature, it will not constitute a significant impact. Has construction lighting of the towers or construction period aviation safety lighting found to be significant on any other project?</p>	<p>ISEGS Findings of Fact relative to construction activities was that VIS-3 would reduce impacts to less than significant. VIS-3 was then deleted from the conditions and the project overall was found to have significant adverse visual impacts. The project required an override on the part of the Commission. ISEGS differs from HHSEGS in both the height of the towers and the proximity to nearby residents and motorists. Staff concludes that while lighting and construction activities would be temporary, the impacts during that period are unmitigable due to the size and placement of the facilities.</p>
<p align="center">13.37</p>		<p>Page 14.13-17, Light or Glare, 2nd full paragraph: The PSA states: "Gas pipeline construction would occur primarily in Nevada on BLM-managed lands. Due to their temporary nature and low visibility, there would be no significant adverse impacts from construction of the pipelines." The FSA should not analyze impacts of project in Nevada.</p>	<p>Staff has appropriately analyzed impacts of the project componets in California on Nevada.</p>
<p align="center">13.38</p>		<p>Page 14.13-17, Conclusion, 1st paragraph, last sentence: The PSA states: "The adoption of the conditions of certification noted herein will mitigate some of the visual impacts at ground level but there is no mitigation for the visual impacts during construction of the power towers." Because any light-related impacts that may occur related to the construction of the power towers will be temporary and short-term, they will be less than significant.</p>	<p>See staff response to 35 above.</p>
<p align="center">13.39</p>		<p>Page 4.13-18, KOP 3, 1st paragraph, 2nd to last sentence: The PSA states: "The 17.5 acre campus-style environmental park will function primarily as a columbarium" Where did this term "environmental park" come from and what does it mean?</p>	<p>St. Therese Mission project documents and Inyo County Planning Department documents refer to St. Therese Mission as "an environmental park development on 17.5 acres..." . See document references below.</p>

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<p align="center">13.40</p>		<p>Page 4.13-18, Visual Sensitivity, 1st paragraph: The PSA states: “The view would be cohesive and highly scenic due to the panoramic nature of the horizon line formed by the Nopah Range were it not for the roadside elements in the foreground and construction activity in the middle ground.” Therefore, the view is not cohesive or highly scenic. This is like saying it would be a sunny day if it were not for the overcast sky</p>	<p>The KOP was structured by the applicant in a such a way to include the foreground elements seen by both passing motorists and future visitors to the St. Therese Mission. This does not change the fact that the view is largely a panoramic and scenic one except for the static nature of the KOP.</p>
<p align="center">13.41</p>		<p>Page 4.13-18, Visual Sensitivity, 1st paragraph, last sentence: The PSA states: “The overall scenic and panoramic view at KOP 3 creates moderate-high viewer concern for passing viewers.” Why moderate to high? What is the basis for this statement? This statement is unsupported by substantial evidence.</p>	<p>KOP 3 is an amalgam of viewer types, from drivers to passengers to visitors to the future St. Therese Mission. KOP 3 features a panoramic view, visible to all types of viewers, but especially to motorists. Motorists who are local, rural or travelling to a vacation destination tend to have a higher sensitivity than commuters or those in industrial areas. Motorist in this area belong to the former categories and therefore have a moderate to high degree of sensitivity.</p>
<p align="center">13.42</p>		<p>Page 4.13-19 and 20, Visual Change, 1st paragraph, last sentence: The PSA states: “But the towers do interrupt the highly scenic panoramic of the Nopah Range and Wilderness Area, therefore view disruption is moderate.” Where overall viewer sensitivity is moderate and view disruption is moderate, does the CEC typically find the impact “substantially degrades” the visual quality of the site or the surroundings? Please explain the applicable thresholds of significance and how they are being applied in this case. Conclusory statements unsupported by substantial evidence, such as this, violate CEQA.</p>	<p>See Visual Resources Table 4 and Appendix VR-1 for an explanation of how staff makes these determinations. Viewer sensitivity is a measure taken prior to the introduction of the project and view disruption is a measure of the change the project brings to the view. There is no inconsistency here.</p>
<p align="center">13.43</p>		<p>Page 4.13-20, 1st full paragraph: The PSA states: “This would create a potentially higher incidence of visual distraction from the motorist’s perspective at KOP 3.” Visual distraction or visual interest?</p>	<p>Staff does not characterize the introduction of two immense, 750' tall power towers with brightly glowing tops creating a halo of light into a rural, panoramic desert landscape as something of visual interest. Rather, it has the potential to be a distraction and irritant to drivers.</p>

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<p align="center">13.44</p>		<p>1. Page 4.13-20, 1st full paragraph: The PSA states: “If the sun were low in the horizon to the south (as in the winter months) or to the west (as in the summer months), the visual dominance and the potential view disruption of the scattering effect of light would add to the overall visual change, which under these circumstances would now both be characterized as high. This results in the overall visual change at KOP 3 as high.” Please explain in the analysis how often and for how long are these circumstances expected to occur.</p>	<p>Staff doesn't feel additional analysis of time extent is necessary.</p>
<p align="center">13.45</p>		<p>Page 4.13-20, 2nd full paragraph: The PSA states: “The contrast and dominance of the project structures in the landscape as seen in the simulation are high and the view disruption of the Nopah Range is high. The overall visual change at KOP 3 is high.” These characterizations are not reflected in KOP 3.</p>	<p>Staff disagrees.</p>
<p align="center">13.46</p>		<p>Page 4.13-20 KOP 3 Summary, 1st paragraph: The PSA states: “Taking into account the moderate visual sensitivity and the high overall visual change, visual impacts at KOP 3 would remain significant even with mitigation. Views of the dominant power towers and bright solar receivers cannot be effectively screened.” KOP 3 does not show high overall change in an already cluttered landscape. This conclusion does not take into account the effect of the continuing development of the Saint Therese Mission project on this view. With completion of the Mission’s structures and landscaping of the parking lot and other areas of the Mission site, views from this KOP toward the solar towers will be substantially screened.</p>	<p>Staff disagrees. Staff has already identified the partial screening effect of the build out of St. Therese Mission.</p>
<p align="center">13.47</p>		<p>Page 4.13-20 KOP 3 Summary, 1st paragraph: The PSA states: “Adoption of Condition of Certification VIS-6 will provide remedial mitigation for the loss of scenic views from KOP 3.” KOP -3 is not a “scenic view.” While another element is added to view, it is already degraded.</p>	<p>The KOP was structured by the applicant in a such a way to include the foreground elements seen by both passing motorists and future visitors to the St. Therese Mission. This does not change the fact that the view is largely a panoramic and scenic one except for the static nature of the KOP.</p>

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<p align="center">13.48</p>		<p>Page 4.13-20 and 21, KOP 4, 1st paragraph: The PSA states: “The community has uninterrupted views of Mount Charleston and the Spring Mountains, hence the name Charleston View.” These views are interrupted by the structures and vegetation within the community.</p>	<p>The low profile of the structures and plantings in Charleston View do not impinge upon the current residents' view of an 11,918' peak and related mountain range.</p>
<p align="center">13.49</p>		<p>Page 4.13-21, KOP 4, 1st partial paragraph: The PSA states: “The subdivision, laid out and permitted in the 1960s, never even began to approach its full build-out capacity.” This is not relevant to visual resources.</p>	<p>Relevance to the discussion of visual resources is found in the background description of the community.</p>
<p align="center">13.50</p>		<p>Page 4.13-21 Visual Sensitivity, 1st paragraph: The PSA states: “To the residents, who have chosen to live within this viewshed, it may be perceived as picture-postcard-like in its scenic value, and therefore of high quality. Other than the low-profile buildings and scattered plantings, there is little to obstruct the view, which is highly visible from the treeline above and down the linear corridor of Silver Street.” This is a subjective characterization. Some residents may perceive this area as “picture-postcard-like.” Other residents, such as those who have abandoned vehicles and artifacts on their property, may not share this</p>	<p>Comment noted.</p>
<p align="center">13.51</p>		<p>Page 4.13-21 Visual Sensitivity, 1st paragraph: The PSA states: “Census counts the population in the vicinity of Charleston View as 68. Therefore the number of permanent viewers is moderately high.” The question is not the number of viewers in the community, but the number of viewers at this KOP. It would be wrong to attribute all residents to this KOP, since some residents may not have this viewpoint from their residence. Has the Staff previously characterized the 68 residential viewers as moderately high?</p>	<p>See Footnote 14 in PSA (15 in FSA) which explains how staff measures numbers of residents.</p>

Appendix 1 -- PSA Response to Comments, Visual Resources

<p align="center">13.52</p>		<p>Page 4.13-22 Visual Change, 1st paragraph: The PSA states: “The introduction of the structures for the HHSEGS facility into the view at KOP 4 dramatically alters the nature of the view from rural and highly scenic to highly industrial.” The analysis does not support the conclusion that KOP 4 is highly scenic. And, as explained previously, “industrial” is a subjective and undefined term.</p>	<p>Introduction of a power plant into a rural, desert landscape is reasonably described as a change to an industrial landscape.</p>
<p align="center">13.53</p>		<p>Page 4.13-22 Visual Change, 1st paragraph: The PSA states: “The industrial gray tone of the tower and the bright white solar receiver on top are in marked contrast from the low-key, natural desert palette.” The use of the descriptor “industrial” for the gray tone of the solar towers is prejudicial. The flat gray color of the solar towers will be neutral, and will not necessarily be inconsistent with the colors of the natural desert palette.</p>	<p>Gray tones are characteristic of power plants and industrial facilities.</p>
<p align="center">13.54</p>		<p>Page 4.13-22 Visual Change, 2nd paragraph: The PSA states: “The two 750-foot towers with their luminescent solar receiver caps dominate the landscape so completely that it will be hard to imagine the unbroken, highly scenic quality of the existing view.” The view is not highly scenic. The view is from a rural desert community without existing aesthetic controls. The description of change in view should be objective and the SA should not intermingle subjective viewer perception into the analysis.</p>	<p>Staff has provided a comparison for the reader to other large structures in the project vicinity.</p>

Appendix 1 -- PSA Response to Comments, Visual Resources

<p align="center">13.55</p>		<p>Page 4.13-22 KOP 4 Summary, 1st paragraph: The PSA states: "Adoption of Condition of Certification VIS-6 will provide remedial mitigation for the loss of scenic views the change in the character of the view from KOP 4." How is this remedial?</p>	<p>The Scenic Resources Interpretive Area's primary function as identified in VIS-6 is to educate and inform the public about the visual resources in the area adversely impacted by the project. VIS-6 as drafted in the PSA included an opportunity for the applicant to highlight the technology in use as part of that educational outreach. The loss of scenic resources and non-conformance with LORS are the primary reasons for the mitigation, not the project technology as described in the applicant's comment. The education component makes it remedial, even though it does not provide mitigation to reduce impacts to less than significant.</p>
<p align="center">13.56</p>		<p>Page 4.13-22 KOP 4 Summary, 1st paragraph: The PSA states: "The planting of trees, however, does not provide complete mitigation for the visual impact of the towers. Therefore, the visual impacts would remain significant and unavoidable." The relevant question is not whether there is complete mitigation. The question is whether with the proposed mitigation, the project as mitigated will substantially degrade the view from KOP 4. The answer is no.</p>	<p>Staff disagrees.</p>
<p align="center">13.57</p>		<p>Page 4.13-23, Visual Sensitivity, 2nd paragraph: The PSA states: "The Old Spanish Trail Highway snaking through the valley and the broad expanse of sky and mountains with ample vegetation is a picture-postcard quality scene of high visual quality and has a high degree of visibility." This is a subjective characterization of the visual sensitivity. The adjectives are highly "value" laden—a "snaking" highway, "broad expanses," "ample" vegetation, "picture postcard" are all terms which impair the objectivity of the analysis.</p>	<p>A visual resource analysis, by its very nature, must use descriptive language to describe the scene for the reader.</p>

Appendix 1 -- PSA Response to Comments, Visual Resources

<p align="center">13.58</p>		<p>RE: KOP-5 What, if any, recreational use of the portion of the Nopah Wilderness falls within the potential viewshed of the Project? This is not a KOP from the solitude of the wilderness. This is a KOP from a road.</p>	<p>KOP 5, like several others, was chosen for a dual purpose: to portray both the view from the road and from the wilderness area. Correspondence from the applicant, dated 4-29-11, following a pre-filing site visit to determine KOP locations, indicates agreement that because of the similarity of the view from VP-6 and VP-7, that VP-6 from the Nopah Wilderness Area would not be used as a KOP in the AFC. Staff further refers the applicant to the AFC, p. 5.13-4, where the KOP is described as "this view is also generally representative of views that would be seen by any visitors to the lower slopes of the eastern front of the Nopah Range Wilderness Area".</p>
<p align="center">13.59</p>		<p>Page 4.13-24, 1st paragraph: The PSA states: "At a speed of approximately one mile per minute, the project's power towers will be in full view of the motorist for nearly five minutes, which is considered a high view duration. Likewise for the recreationist, who is hiking, or camping, possibly enjoying the solitude of the view, the duration would be high." There is no hiking or camping here and no solitude roadside.</p>	<p>The KOP, like several others, was chosen for a dual purpose: to portray both the view from the road and from the wilderness area. In a correspondence dated 4-29-11, following a pre-filing site visit to determine KOP locations, indicates agreement that because of the similarity of the view from VP-6 and VP-7, that VP-6 from the Nopah Wilderness Area would not be used as a KOP in the AFC.</p>
<p align="center">13.60</p>		<p>Page 4.13-24 Visual Change, 1st paragraph, 6th sentence: The PSA states: "The smooth gray concrete towers capped with a radiant solar generator do not blend in with the natural hues of the desert floor, mountains and sky." On the contrary, the neutral gray color of the solar towers will be generally compatible with the color of the desert soils and under hazy and dusty atmospheric conditions, will readily blend into the backdrop.</p>	<p>A "radiant solar generator" does not blend in with the natural hues of the desert floor, mountains and sky.</p>

Appendix 1 -- PSA Response to Comments, Visual Resources

<p align="center">13.61</p>		<p>Page 4.13-25, Visual Sensitivity, 2nd paragraph: The PSA states: "Viewers at this location are locals traversing the two-track path in their four-wheel drive vehicles and recreationists." Why is it assumed the viewers are "locals" or recreationists? Is there any objective data regarding the type or number of viewers at this location?</p>	<p>It is a reasonable assumption that the viewers are locals or recreationists based upon staff observation, the location of the track and the lack of data available from BLM or other sources.</p>
<p align="center">13.62</p>		<p>Page 4.13-25 and 26, Visual Sensitivity, 2nd paragraph: The PSA states: "Recreationalists would naturally have a higher degree of viewer concern, as they would be traveling more slowly and taking in the surroundings, including the panoramic view as shown in KOP 7 as well as the views to and within the Pahrump Valley Wilderness Area." This statement assumes a use different than off-road vehicle users. What is that use?</p>	<p>Recreationalists might be hikers or equestrians following the identified segment of the Old Spanish Trail.</p>
<p align="center">13.63</p>		<p>"....The publication of this auto tour may have the effect of increasing visitorship to the off-road trails and sites along the route in the future, thereby increasing the viewer concern." This is not relevant to this KOP and should be deleted.</p>	<p>As the KOP is representative of both the Old Spanish/Mormon Trail and views from the Pahrump Valley Wilderness (another dual-purpose KOP), it is relevant to note that there may be an increased degree of interest in the future and a higher number of viewers due to the publication of the BLM auto-tour.</p>

Appendix 1 -- PSA Response to Comments, Visual Resources

<p align="center">13.64</p>		<p>Page 4.13-26, Visual Sensitivity, 3rd full paragraph: The PSA states: "This is borne out as the KOP represents both the view from a wilderness area as well as from a point on a national historic trail, where viewer concern should be higher than average." It is not in the wilderness and, if it is on a historic trail, it should not be disclosed here. While this KOP may be on federally managed (BLM) lands, it is far from the boundaries of the wilderness.</p>	<p>The applicant participated in field-selecting the KOP in conjunction with staff, identifying the trail track using GPS coordinates and agreeing to use the KOP as representative of both the Old Spanish/Mormon Trail alignment as shown on NPS documents, Delorme Maps and the applicant's own VR Figures 5.13-1, DR 32-1 and Figure DR 37-1, and as a nearby representation of the view from the Pahrump Valley Wilderness. These discussions took place with staff on April 27, 2011, while in the process of selecting KOPs for the AFC. Please refer to Data Response 32 which describes the KOP 7 in detail, including, "it is intended to represent the view ...of recreational users who might travel to the Pahrump Valley Wilderness Area...the new KOP (7) would also represent a view on the alignment of the Old Spanish National Trail".</p>
<p align="center">13.65</p>		<p>Page 4.13-26, Visual Change, 1st paragraph: The PSA states: "Were the towers and related facilities closer to the viewer, the dominance would be high." They are not "closer," however. This is another example of the PSA assuming hypothetical circumstances ("were the towers closer") in order to find an impact, even if there is no substantial evidence to support such a conclusion.</p>	<p>Sentence removed in discussion of Visual Change KOP 7.</p>
<p align="center">13.66</p>		<p>Page 4.13-27, KOP 7 Summary, 1st paragraph: The PSA states: "Adoption of Condition of Certification VIS-6 will provide remedial mitigation for the loss of scenic views from KOP 7." As above. How is this remedial?</p>	<p>The Scenic Resources Interpretive Area's primary function as identified in VIS-6 is to educate and inform the public about the visual resources in the area adversely impacted by the project. It is also offered as mitigation for non-compliance with Inyo County LORS.</p>
<p align="center">13.67</p>		<p>Page 4.13-34, 1st full paragraph: The PSA states: "During operation, the proposed project has the potential to introduce light offsite to the roadway and surrounding properties, and up-lighting to the nighttime sky. If bright exterior lights were unshielded and lights not directed onsite they could introduce significant nighttime light to the vicinity."</p>	<p>This is standard Energy Commission language for light and glare analysis.</p>

Appendix 1 -- PSA Response to Comments, Visual Resources

<p align="center">13.68</p>		<p>Page 4.13-34, 3rd full paragraph: The PSA states: “The addition of the aviation safety lighting will substantially alter the nighttime appearance of the project area and will be prominently featured in the night sky due to the height of the towers and the number of lights required by the towers’ size.” This is not correct.</p>	<p>18 FAA lights will be highly visible at night.</p>
<p align="center">13.69</p>		<p>Page 4.13-34, 3rd full paragraph: The PSA states: “The applicant indicates there will be eighteen FAA warning lights on each tower. Once the project becomes operational, the visual impact of the federally required aviation safety lighting is unmitigable, and therefore would be significant.” As indicated previously, the required FAA aviation safety lighting will affect only a small area of the night sky, leaving most of the sky unaffected, and they will have no effect on ambient lighting conditions in the surrounding area or on the ability of viewers in the area to see the stars and planets. Thus, the impacts of this lighting would be less than significant.</p>	<p>Staff notes that Ivanpah Solar Electric Generating System (ISEGS) is a power tower technology system previously analyzed and licensed by the Energy Commission. The FSA acknowledged the existence of FAA lighting during the operational phase and that staff was unaware of any thresholds for significance for FAA lighting. Staff found for ISEGS that with all the other lighting controls in place, the FAA lighting would not likely constitute a significant impact. The Final Decision made Findings that the ISEGS nighttime lighting would be less than significant with implementation of the COC VIS-4. The ISEGS differs substantially from HHSEGS, however, in the height of the proposed towers and in the distance from the nearest residences or motorists. Therefore, the number of FAA lights and the proximity to sensitive viewers is greater for the HHSEGS project.</p>
<p align="center">13.70</p>		<p>Page 4.13-35, CUMULATIVE IMPACTS AND MITIGATION (Generally) As discussed in General Comments, the cumulative impacts analysis should not address projects in Nevada, nor projects outside the viewshed.</p>	<p align="center">Staff disagrees.</p>
<p align="center">13.71</p>		<p>Page 4.13-36 Visual Resources Table 5 – Projects Considered in the Cumulative Impacts Analysis: The PSA should address only projects in California and only projects in the viewshed.</p>	<p align="center">Staff disagrees.</p>

Appendix 1 -- PSA Response to Comments, Visual Resources

13.72		Page 4.13-40 Visual Resources Table 6 – Compliance with Applicable Laws, Ordinances, Regulations, and Standards, Local, Row 1 (Inyo County General Plan, Goals and Policies...), Consistency Determination column: “No” Would the Staff position if adopted, be cured by the GPA and rezoning or would a LORS override be required?	A General Plan Amendment would likely change this to "consistent"
13.73		Page 4.13-41 Visual Resources Table 6 – Compliance with Applicable Laws, Ordinances, Regulations, and Standards, Local, Row 4 (Inyo County Zoning Code Chapter 18.12.OS (Open Space)), Policy and Strategy Description column: The PSA states: “Maximum height of buildings in OS Zone: Principal buildings 30 feet, accessory buildings 25 feet.” This is not a visual LORS.	Removed from LORS Tables

References for # 39 above:

St. Therese Mission Project Brief, 2010.

Inyo County Planning Department Notice of Determination, June 23, 2010

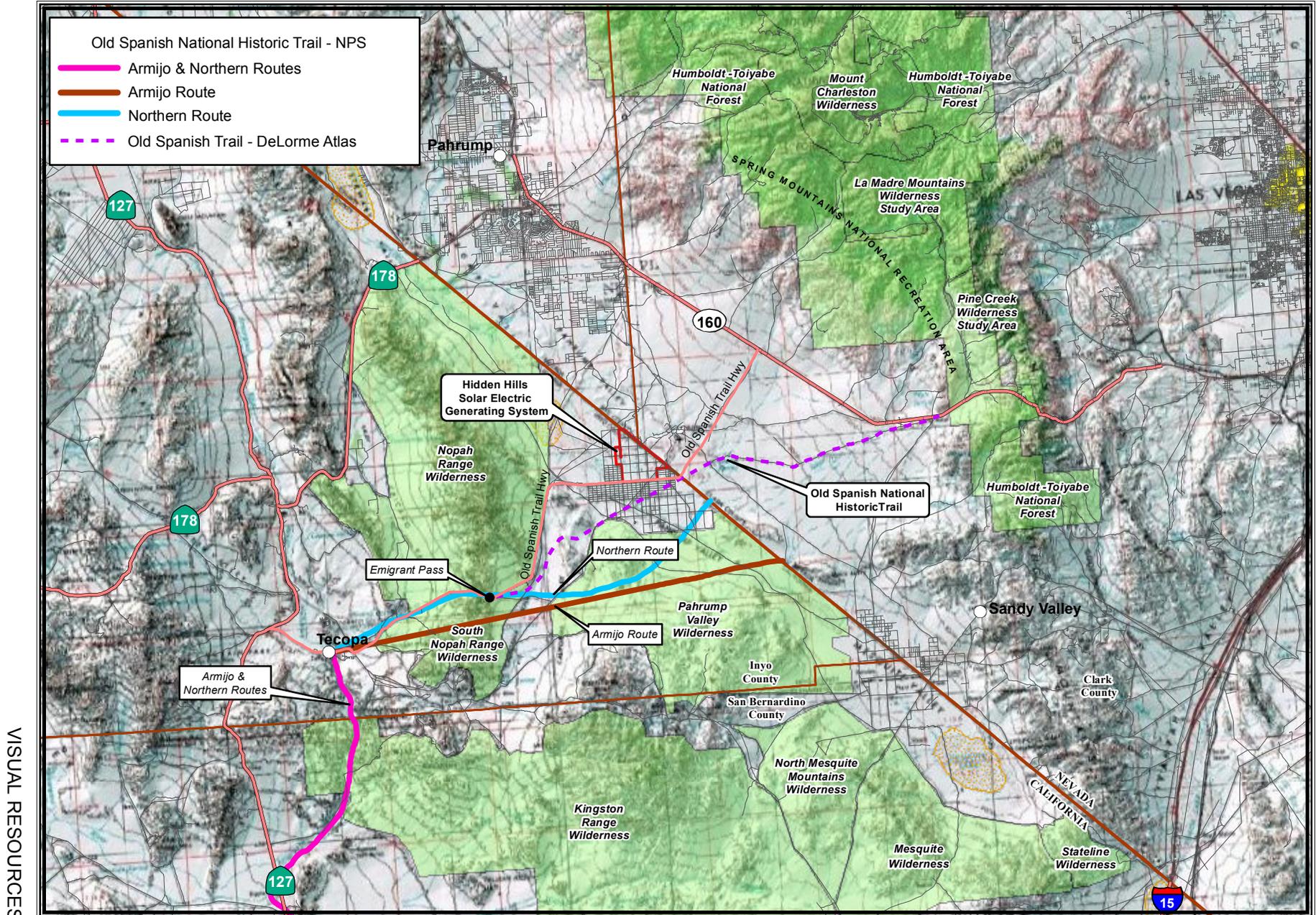
Inyo County Planning Department, Draft Mitigated Negative Declaration, Conditional Use Permit #2010-02/St. Therese Mission

Inyo County Planning Department, Appendix G, CEQA Initial Study & Environmental Checklist Form, CUP #2010-02 St. Therese Mission

Department of Fish & Game, CEQA Filing Fee No Effect Determination Form, 5/28/2010

VISUAL RESOURCES - FIGURE 1

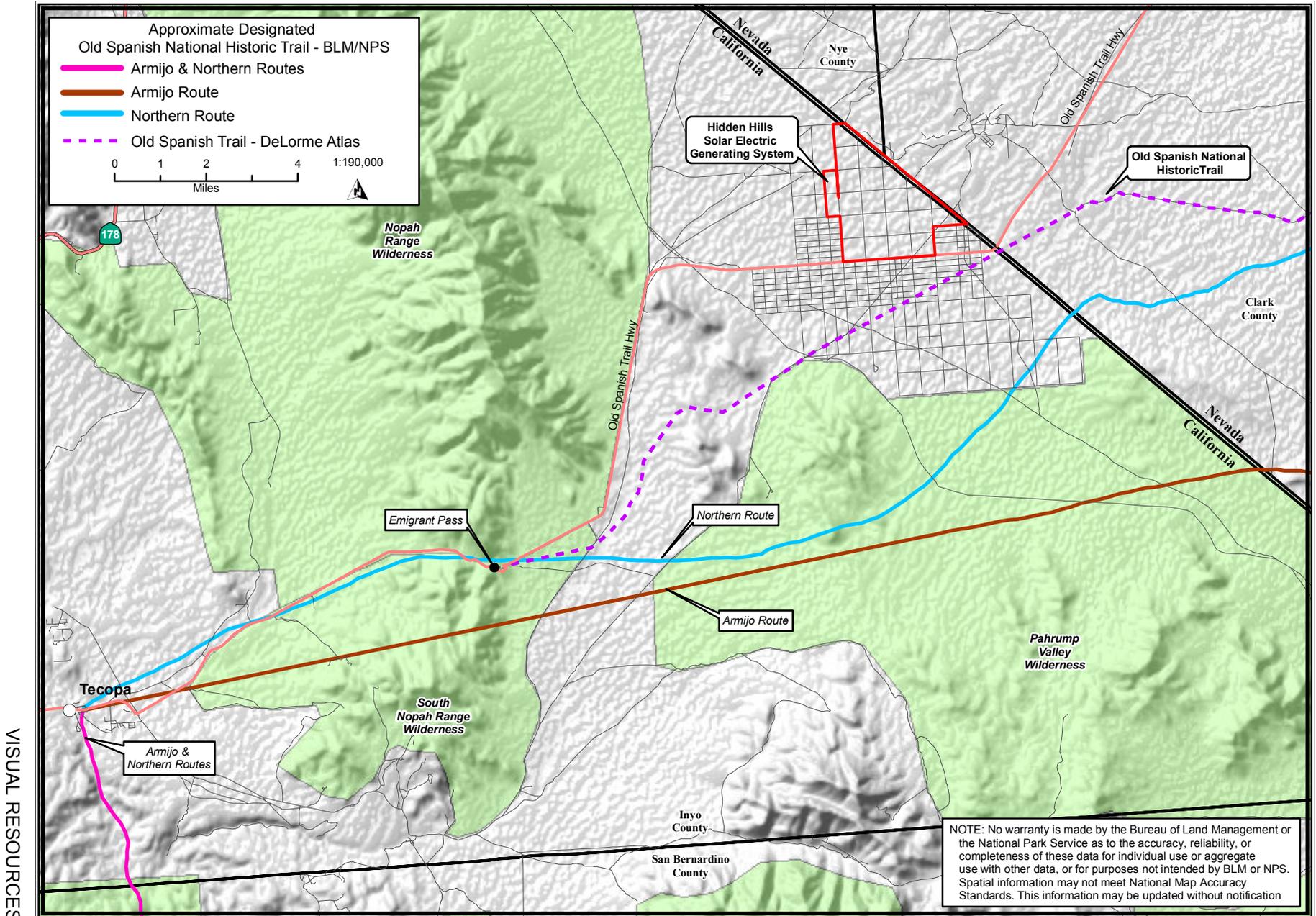
Hidden Hills Solar Electric Generating System (HHSEGS) - Trails, Recreation and Wilderness Areas in the Project Vicinity



VISUAL RESOURCES

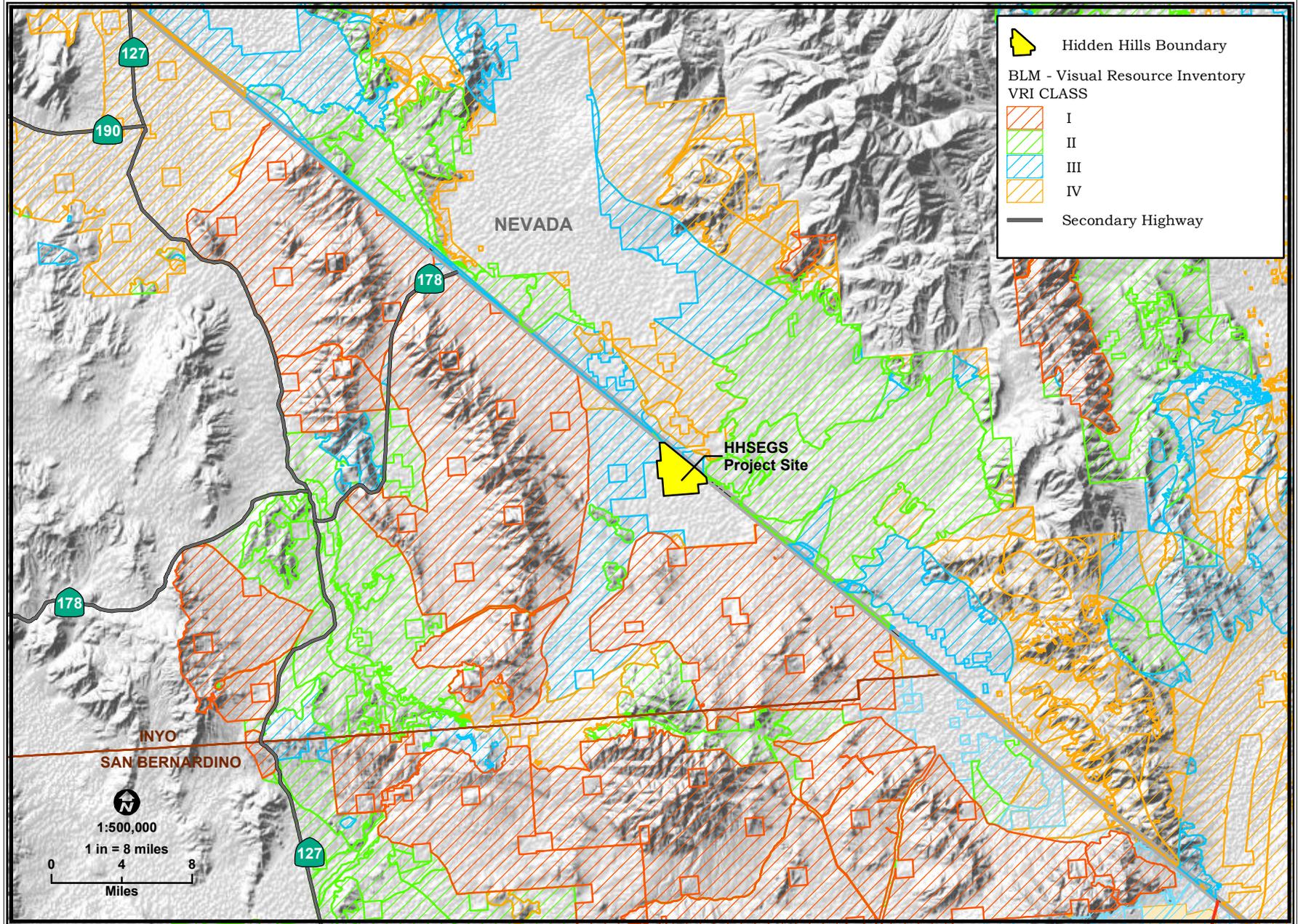
VISUAL RESOURCES - FIGURE 2

Hidden Hills Solar Electric Generating System (HHSEGS) - Historic Trails in the Project Vicinity



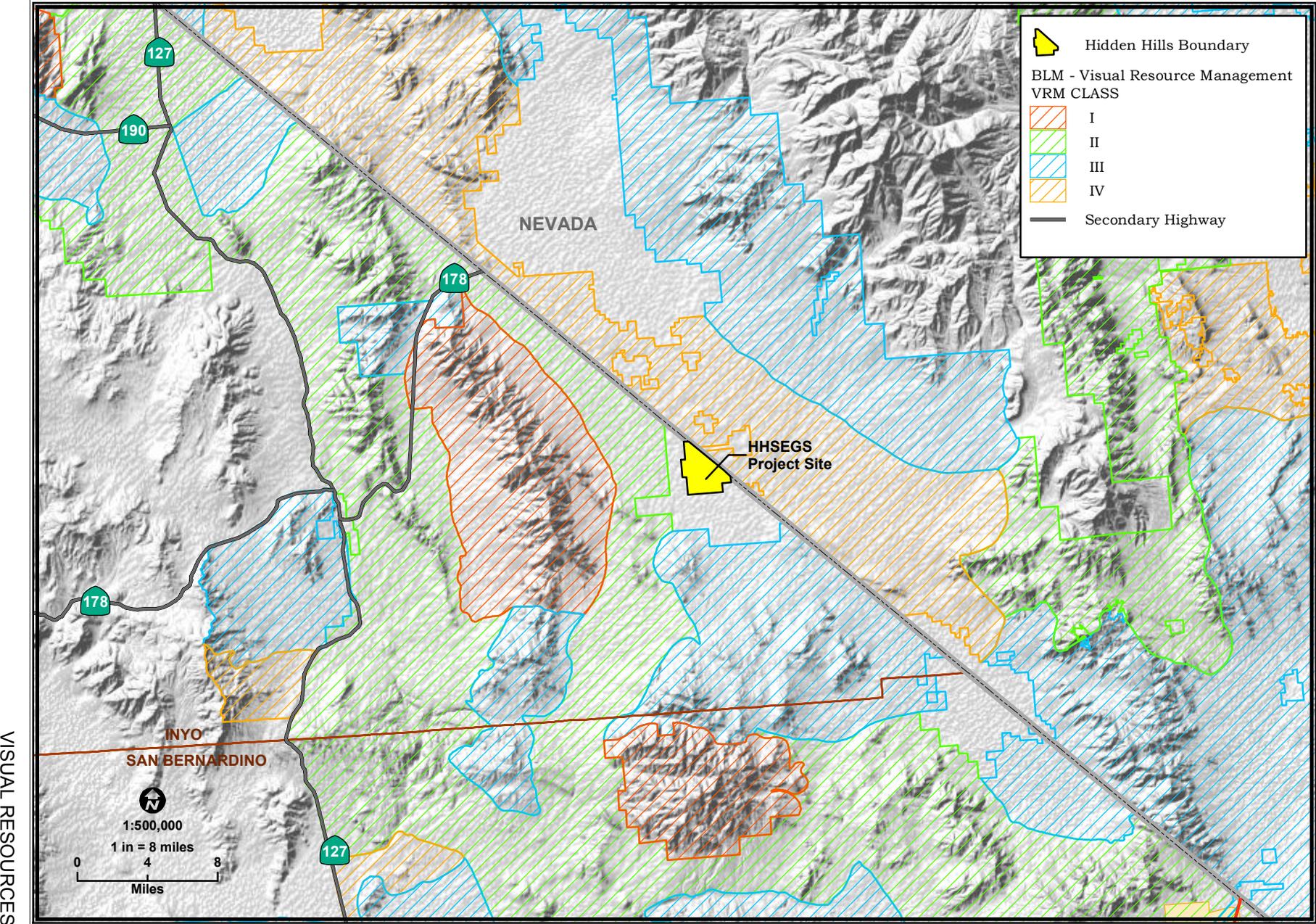
VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 3
 Hidden Hills Solar Electric Generating System (HHSEGS) - BLM Visual Resource Inventory



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 4
Hidden Hills Solar Electric Generating System (HHSEGS) - BLM Visual Resource Management



VISUAL RESOURCES - FIGURE 5

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View near KOP 7 toward the South Nopah and Kingston Ranges to the west showing the two-track path known as the Old Spanish/Mormon Trail.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 6

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View from south of Charleston View across the Pahrump Valley toward Mt. Charleston and the Spring Mountains.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 7

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

Old Spanish/Mormon Trail looking eastward toward Mount Charleston near KOP 7



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 8

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View of Nopah Range looking northwest from Old Spanish Trail Highway west of the project site.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 9

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View from Old Spanish Trail Highway north toward Pahrump Dry Lake.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 10

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View from State Line Road southwest across project site toward Charleston View.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 11

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View south toward Pahrump Valley Wilderness Area from Cathedral Canyon Road in Nevada.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 12

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View of Charleston View residence south of the project site along Old Spanish Trail Highway.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 13

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View of residence in Charleston View south of the project site.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 14

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo



View of existing transmission poles along Old Spanish Trail Highway in the vicinity of the project site.

VISUAL RESOURCES - FIGURE 14

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo



View from Nevada Highway 160 Westbound looking toward the project site.

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: Staff Photo

VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 15

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

View of a telecommunications tower north of Manse Road in the southern area of Pahrump, Nevada.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 16

Hidden Hills Solar Electric Generating System (HHSEGS) - Landscape Character Photo

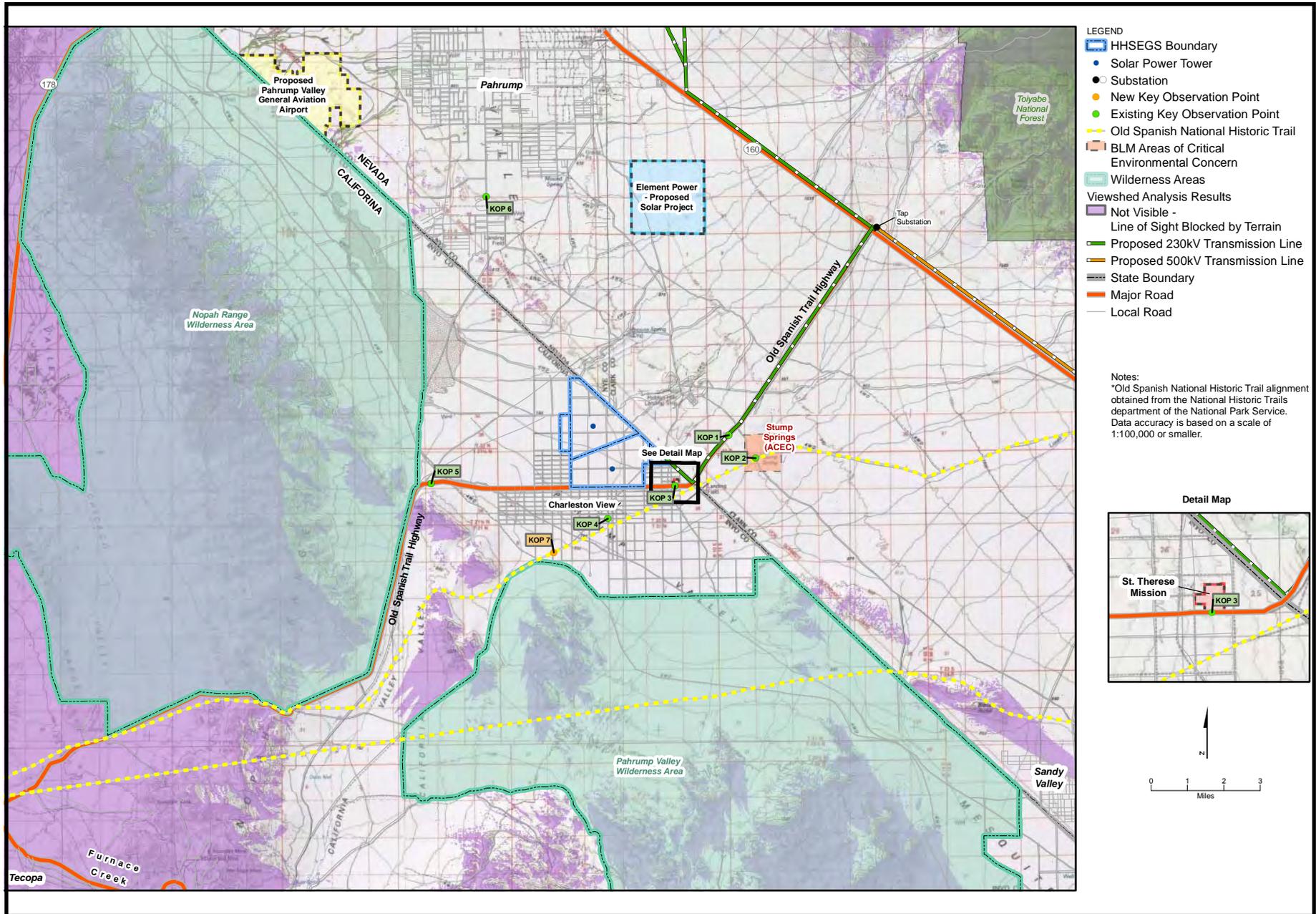
View of water storage tank at intersection of Manse Road and Nevada Highway 160.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 17

Hidden Hills Solar Electric Generating System (HHSEGS) - Location of Key Observation Points



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 18a

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 1. Existing view toward the project site from Old Spanish Trail Highway traveling southbound, 1.75 miles northeast of the project site.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 18b

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 1. Simulated view toward the project site from Old Spanish Trail Highway traveling southbound, 1.75 miles northeast of the project site.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 19a

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 2. Existing view toward the project site from Stump Springs ACEC.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 19b

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 2. Simulated view toward the project site from Stump Springs ACEC.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 20a

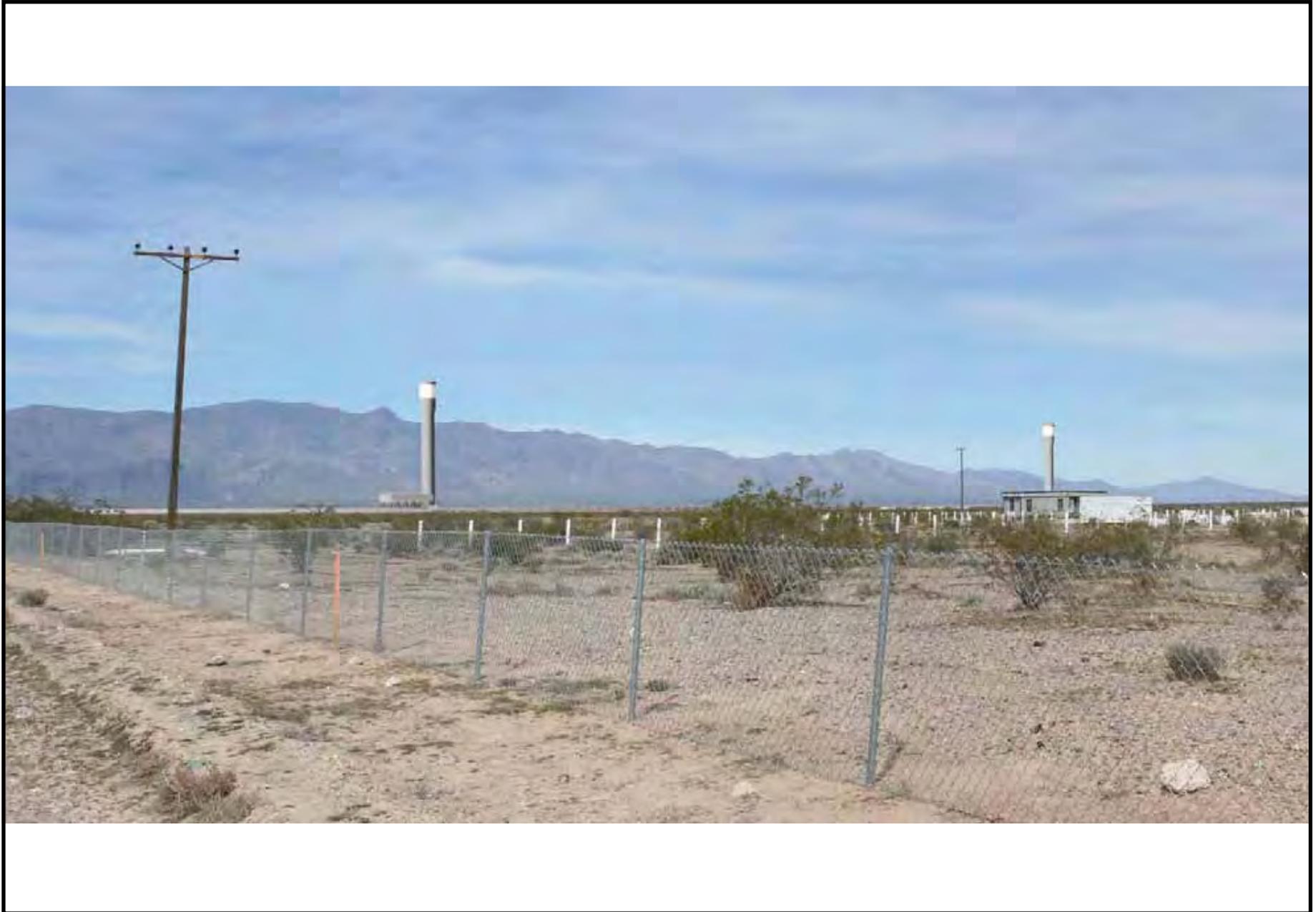
Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 3. Existing view toward the project site from the front of the proposed St. Therese Mission project.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 20b

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 3. Simulated view toward the project site from the front of the proposed St. Therese Mission project.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 20c

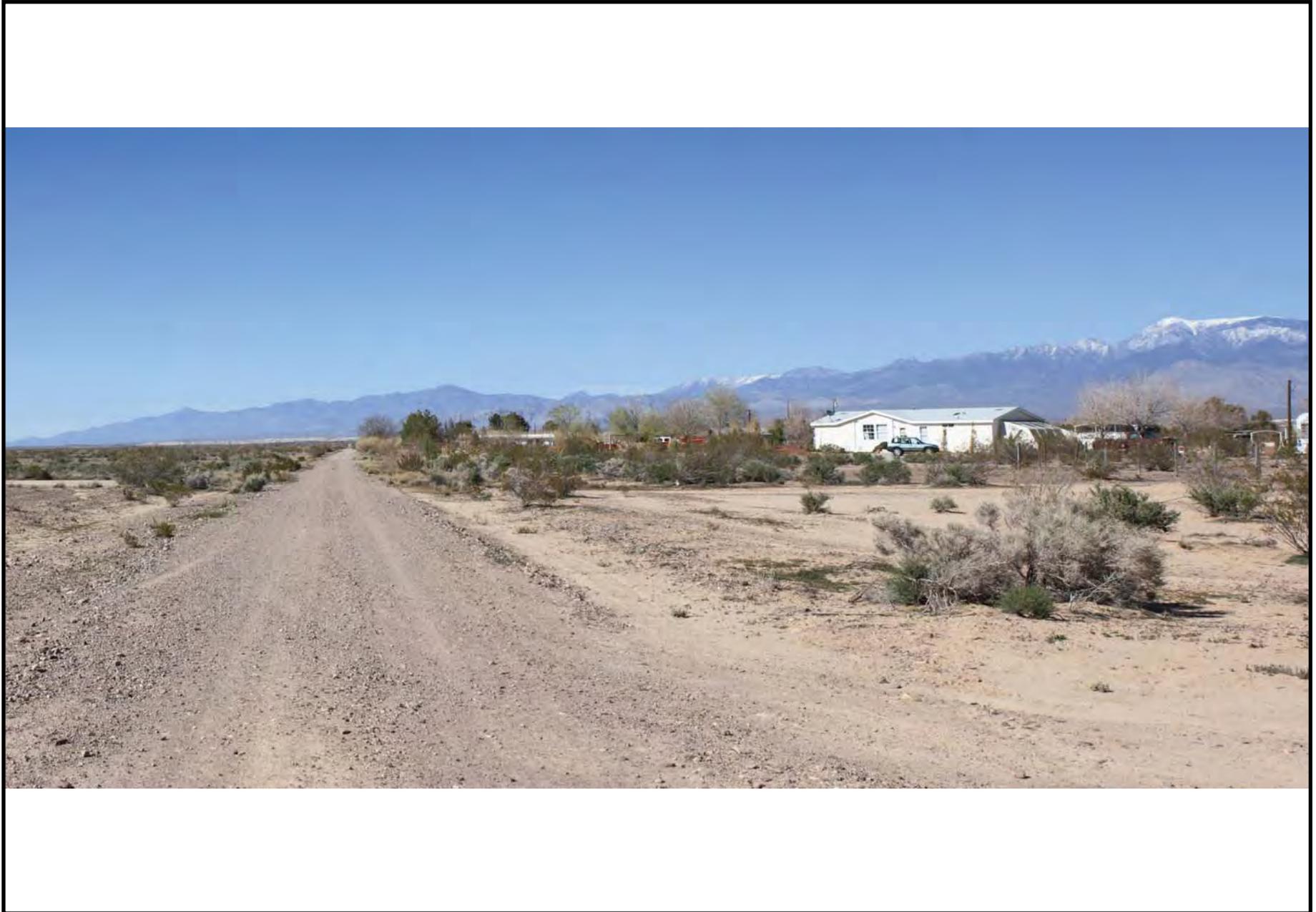
Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 3. Simulated view toward the project site from the front of the proposed St. Therese Mission project, showing visual effect of Dust/Paticulates



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 21a

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 4. Existing view toward the project site from the rural residential community of Charleston View (aka Calvada Springs).



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 21b

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 4. Simulated view toward the project site from the rural residential community of Charleston View (aka Calvada Springs).



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 22a

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 5. Existing view toward the project site from Old Spanish Trail Highway traveling eastbound, 3.8 miles west of the project site.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 22b

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 5. Simulated view toward the project site from Old Spanish Trail Highway traveling eastbound, 3.8 miles west of the project site.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 23a

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 6. Existing view toward the project site from the rural residential area closest to the project site within the community of Pahrump.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 23b

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 6. Simulated view toward the project site from the rural residential area closest to the project site within the community of Pahrump.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 24a

Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 7. Existing view toward the project site from Garnet Road, 1.75 miles south of Tecopa Road.



VISUAL RESOURCES

KOP 7

VISUAL RESOURCES - FIGURE 24b

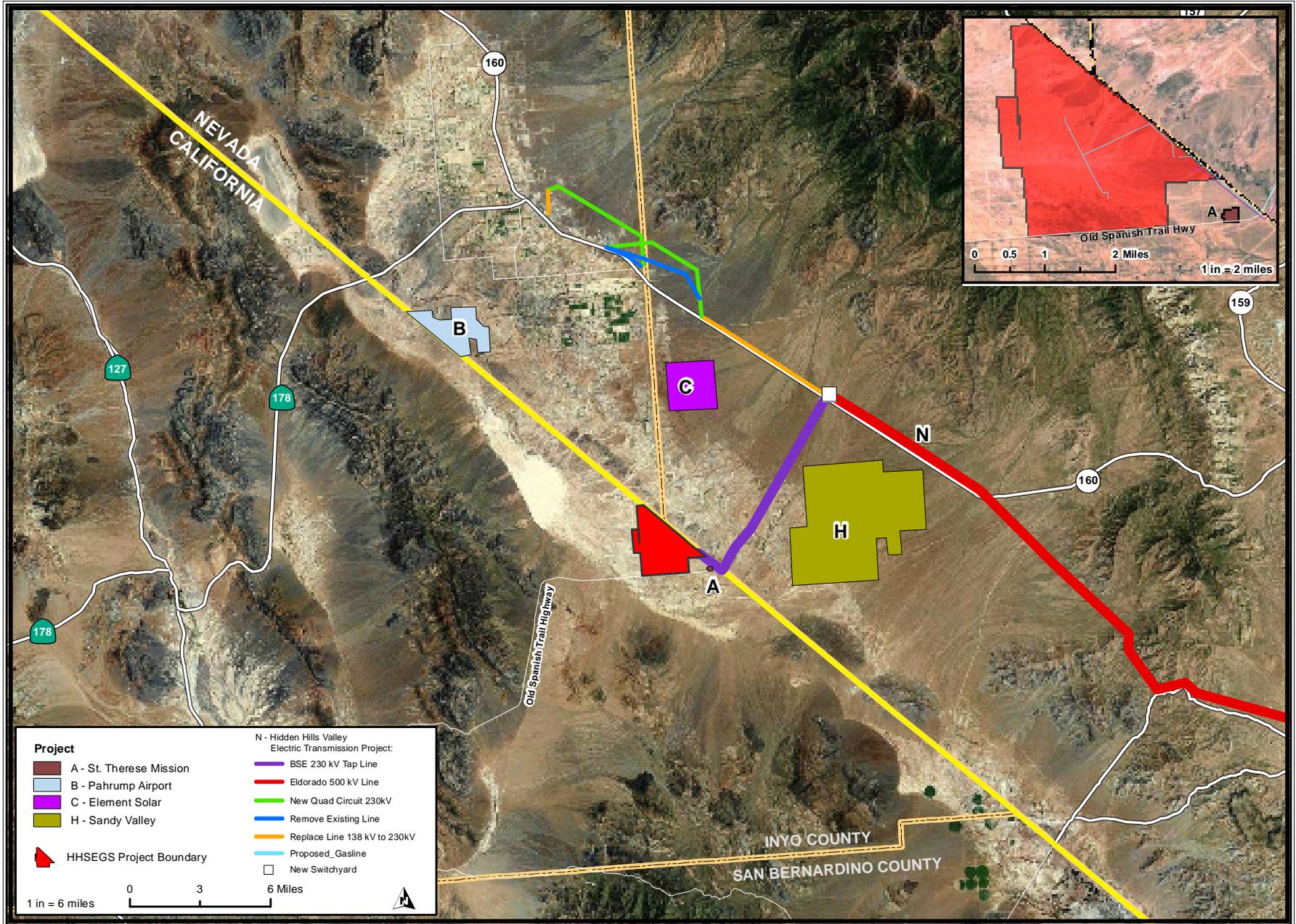
Hidden Hills Solar Electric Generating System (HHSEGS) - KOP 7. Simulated view toward the project site from Garnet Road, 1.75 miles south of Tecopa Road.



VISUAL RESOURCES

VISUAL RESOURCES - FIGURE 25

Hidden Hills Solar Electric Generating System (HHSEGS) - Cumulative Projects within the viewshed of HHSEGS



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SOURCE: BLM Southern Nevada District - Renewable Energy in Southern Nevada, BLM California - Renewable Energy Priority Projects, and Los Angeles Department of Water and Power.

VISUAL RESOURCES - FIGURE 26
 Hidden Hills Solar Electric Generating System (HHSEGS) - Bonanza Peak Trail



View toward HHSEGS Project Site from Bonanza Trail

