

Executive Summary

1.1 Introduction

This Application for Certification (AFC) for the Hidden Hills Solar Electric Generating System (HHSEGS) has been prepared in accordance with the California Energy Commission's (CEC) Power Plant Site Certification Regulations (March 2008). The project is being developed by Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC (collectively, the Applicant). Each of these entities will own its respective plant individually, and together the entities will own the shared facilities located in an onsite common area as tenants in common. Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC, are wholly owned subsidiaries of Hidden Hills Solar Holdings, LLC, which is in turn a wholly owned subsidiary of BrightSource Energy, Inc. (BrightSource), a Delaware corporation. The Applicant intends to acquire a leasehold estate in privately held land located in the Mojave Desert between Death Valley and the California-Nevada border as the site for their respective plants and the common area. The land is owned by The Roland John Wiley Trust, The Mary Wiley Trust and Section 20, LLC and is under options to lease with BrightSource.

Consistent with the CEC's past practice, the Applicant requests that the final Orders of Approval for the HHSEG AFC recognize that each solar plant will be independently owned and operated,¹ and that during the construction and/or operation phase, the Conditions of Certification shall apply severally and individually to the respective Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC, solar plants, such that non-compliance of one plant shall not be deemed non-compliance by the other plant.

HHSEGS is a net 500-megawatt (MW) concentrating solar project located in Inyo County, California, on the California-Nevada border. The separate ownership of each of the solar plants will facilitate financing and allow for separate power sales agreement negotiations with major Californian utilities for qualifying renewable sources under California's Renewable Portfolio Standard (RPS), with the objective of achieving commercial operation of the net 500-MW plant in 2015.

This executive summary provides an overview of the project in accordance with Appendix B, Section (a) of the CEC regulations.

This AFC has been prepared in accordance with CEC guidelines and provides:

- A detailed description of the project
- An assessment of the project's likely impact on the existing environment
- Measures proposed by the Applicant to mitigate potential project impacts to ensure that environmental issues are properly and responsibly addressed

¹ See the Orders of Approval for the Ivanpah Solar Electric Generating System (07-AFC-5), Document CEC-800-2010-004 CMF.

- A discussion of compliance with applicable laws, ordinances, regulations, and standards (LORS)

The HHSEGS site will be located on privately owned land in California and the transmission line and natural gas pipeline (i.e., the linear corridors) will be located in Clark and Nye counties, Nevada, primarily on federal land managed by the U.S. Bureau of Land Management (BLM), outside the CEC's jurisdiction. Therefore, while an AFC is being prepared for submission to the CEC for the HHSEGS site, BLM will be the lead agency for the preparation of a third-party Environmental Impact Statement (EIS) for the linear transmission corridors. For this reason, this AFC focuses only on project features in California and does not provide in-depth discussion of the linear corridors in Nevada.

1.2 Project Overview

HHSEGS will 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 (see Figures 1.2-1 and 1.2-2; figures are provided at the end of this section).

1.2.1 Solar Plants and Associated Facilities

HHSEGS will comprise two solar fields and associated facilities: the northern solar plant (Solar Plant 1) and the southern solar plant (Solar Plant 2). Each solar plant will generate 270 megawatts (MW) gross (250 MW net), for a total net output of 500 MW. Solar Plant 1 will occupy approximately 1,483 acres (or 2.3 square miles), and Solar Plant 2 will occupy approximately 1,510 acres (or 2.4 square miles). A 103-acre common area will be established on the southeastern corner of the site to accommodate an administration, warehouse, and maintenance complex, and an onsite switchyard. A temporary construction laydown and parking area on the west side of the site will occupy approximately 180 acres (see Figure 1.2-3).

Each solar plant will use heliostats – 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 solar power tower near the center of each solar field. The solar power tower technology for the HHSEGS project design incorporates an important technology advancement, the 750-foot-tall solar power tower. One principle advantage of the HHSEGS solar power tower design is that it results in more efficient land use and greater power generation. The new, higher, 750-foot solar power tower allows the heliostat rows to be placed closer together, with the mirrors at a steeper angle. This substantially reduces mirror shading and allows more heliostats to be placed per acre. More megawatts can be generated per acre and the design is more efficient overall.

Each plant will consist of the following elements:

- One heliostat array with about 85,000 heliostats
- A power block containing a Rankine-cycle non-reheat steam turbine, SRSG, feed water heaters, a deaerator, an emergency diesel generator, and a diesel fire pump

- Five natural-gas-fired boilers, ranging in size from 12 to 500 million British thermal units per hour (MMBtu/hr)
- An air-cooled condenser to minimize the use of water in the desert environment
- Access roads and drive zones will also be developed on the project site to facilitate operations and maintenance activities, emergency access, and site security

Additionally, six onsite groundwater supply wells will be drilled and developed to provide raw water for the HHSEGS; two new wells per power block (primary and backup) and two wells at the administration complex

1.2.2 Linear Corridors

The transmission and natural gas pipeline alignments will be located in Nevada, primarily on federal land managed by the U.S. Bureau of Land Management (BLM), except for small segments of the transmission line (both options) in the vicinity of the Eldorado Substation, which is located within the city limits of Boulder City, Nevada. In compliance with the National Environmental Policy Act (NEPA) a detailed environmental analysis of the transmission and natural gas pipeline alignments will be prepared by BLM, as the lead agency (see Section 2.1.1).

1.2.2.1 Transmission Line

Two distinct transmission options are being considered because of a unique situation concerning Valley Electric Association (VEA). Under the first option, the project would interconnect via a 230-kilovolt (kV) transmission line to a new VEA-owned substation (Tap Substation) at the intersection of Tecopa Road² and Nevada State Route (SR) 160 (the Tecopa/SR 160 Option). The other option is a 500-kV transmission line that interconnects to the electric grid at the Eldorado Substation (the Eldorado Option), in Boulder City, Nevada.

1.2.2.2 Natural Gas Pipeline

HHSEGS will require a 12- to 16-inch-diameter natural gas pipeline. It will exit the HHSEGS site at the California-Nevada border and travel on the Nevada side southeast along the state line, then northeast along Tecopa Road until it crosses under SR 160. From this location a 36-inch line will turn southeast and continue approximately 26 miles, following the proposed Eldorado 500-kV transmission line corridor, to intersect with the Kern River Gas Transmission (KRGT) pipeline. A tap station will be constructed at that point to connect it to the KRGT line. The total length of the natural gas pipeline will be approximately 35.3 miles

1.3 Project Objectives

The Applicant's project objectives are described in more detail in the body of this AFC. Some of the basic project objectives include the following:

- To safely and economically construct and operate a net 500 MW, solar electric generating facility in California capable of selling competitively priced renewable

² The road is also called Tecopa Highway and Old Spanish Trail Highway. The names are generally used interchangeably.

energy, consistent with the procurement obligations of California's publicly owned and privately owned utilities

- To use BrightSource's proprietary technology in another utility-scale project, further proving the technical and economic viability of the technology
- To locate the solar electric generating facility in an area of high solaririty
- To reduce stormwater impacts by selecting a site with minimal slope, predominately 5 percent slope or less
- To site the project in a timely manner by minimizing potentially significant impacts and complying with applicable LORS
- To secure site control within a reasonable timeframe and a reasonable effort
- To locate the solar electric generating facility on land that has been identified by local governments as suitable for renewable energy development
- To assist California in repositioning its generation asset portfolio to use more renewable energy in conformance with state policies, including the policy objectives set forth in Senate Bill (SB) 1078 (California RPS Program), Assembly Bill (AB) 32 (California Global Warming Solutions Act of 2006), and SB X 1-2 (the California Renewable Energy Resources Act) recently signed by Governor Brown codifying the 33 percent RPS by 2020
- To comply with provisions of power sales agreements to develop a net 500 MW solar generating facility that can interconnect to the CAISO Balancing Authority with the potential of achieving a commercial on-line date as soon as possible, targeted for the first/second quarter of 2015
- To provide renewable power capable of providing grid support by offering power generation that is flexible, and delivered to the grid operator through communications with a scheduling coordinator
- To generate renewable electricity that will be qualified as meeting the RPS requirements of the CEC, California Public Utility Commission, and the Western Renewable Energy Generation Information System program for tradable renewable energy credits

1.4 Project Site Selection

The Applicant's approach to project site selection focused on identifying potential project sites that satisfy most of its basic project objectives, are consistent with existing LORS, and have a low potential for environmental impacts. The HHSEGS site is consistent with these site selection criteria and was based, in part, on the following key selection criteria:

- **Site Suitability (Solarity, Size and Grade)**—Site needs to be located in an area with long hours of sunlight (low cloudiness). It needs to be at least 5 square miles of contiguous land and, to reduce erosion potential, it needs to be relatively flat with a grade of 5 percent or less.

- **Site Control**—Land has to be available for sale or use (e.g., lease, purchase or right-of-way grant). If private land, the land owner must be willing to negotiate a long-term option agreement so that site control does not require a large capital investment until the license is obtained. If public land, the parcels must be free of competing right-of-way applications and maintain a compatible development timeframe. Public land is generally considered to be less desirable than private land.
- **Proximity to Infrastructure**—Site needs to be located near high voltage transmission lines with the ability to interconnect to a CAISO system, a gas transmission system, and have an adequate water supply.
- **Environmental Sensitivity**—Site should have few or no environmentally sensitive areas and should allow development with minimal environmental impacts.
- **Jurisdictional Issues**—Proposed use should be consistent with the existing jurisdictional policies. It should provide opportunity for compliance with all LORS.
- **Economic Viability**—Project needs to be economically viable and competitive with other renewable technologies including wind, geothermal, and solar. The site should be located on property currently available at a reasonable cost, have reasonable proximity to infrastructure and have good solarity. Sites with excellent solarity may be able to carry higher mitigation costs or infrastructure costs.

1.5 Facility Location

HHSEGS is located on land owned by The Roland John Wiley Trust, The Mary Wiley Trust, and Section 20, LLC. The project site is undeveloped, and therefore, has no postal address. However, Tecopa Road (also known as the Old Spanish Trail Highway) passes along the southern edge of the site. As shown in Figure 1.5-1, the land area (project boundary) consists of Township 22 North, Range 10 East, Sections (or portions thereof) 15, 16, 20, 21, 22, 23, 26, 27, and 28. The property boundary encompasses 3,277 acres. The assessor parcel numbers (APNs) for the site are: 048-110-002, 048-120-010 and all parcels in Book 048 pages 50, 60, 61, and 64 through 71.

An oblique aerial photo of the site is presented as Figure 1.5-2. A rendering of the site after construction is presented as Figure 1.5-3. A close-up rendering of Plant 2, showing the power block is provided as Figure 1.5-4.

Assessor parcel numbers and the names of the private landowners within 1,000 feet of the HHSEGS site are included in Appendix 1A.

1.6 Project Schedule

Construction of HHSEGS, from perimeter fencing to site preparation and grading to commercial operation, is expected to take place from the third quarter of 2012 to the second quarter of 2015 (29 months total). The two solar plants will be constructed concurrently with a planned 3-month delay between their start dates. The common area facilities will be built concurrently with Solar Plant 1. Prior to the start of construction, the site perimeter will be fenced with desert tortoise exclusion fencing and cleared of desert tortoises.

1.7 Project Ownership

Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC, will each own its respective solar plant individually, and together the entities will own the shared facilities located on the common area as tenants in common. Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC, will hold leasehold interests in privately held land located in the Mojave Desert between Death Valley and the California-Nevada border as the site for their respective solar plants and the common area. The land is owned by The Roland John Wiley Trust, The Mary Wiley Trust, and Section 20, LLC, and is currently under options to lease with BrightSource.

1.8 Project Alternatives

The CEC conducts its review of alternatives to satisfy the Warren-Alquist Act and the California Environmental Quality Act. The CEC Guidelines require a discussion of the range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. To enable this review, the criteria and basic project objectives that led to the selection of the site and design features of HHSEGS are provided, along with a detailed discussion of the range of alternatives considered (see Section 6.0, Alternatives, for a more detailed discussion).

A “No Project” alternative and a Conservation alternative were considered and rejected as inconsistent with the Applicant’s objectives, which include the need to develop additional renewable generation within southern California. In addition, California’s goals for increased use of renewable power and reduction of carbon sources would not be as well served, including the policy objectives set forth in SB 1078 (California RPS Program), AB 32 (California Global Warming Solutions Act of 2006) and the recently signed SB X 1-2 (California Renewable Energy Resources Act). Also, the No Project and Conservation alternatives could result in greater natural gas consumption and air pollution in the state because without this facility, and it is likely that older power plants that create substantially more air pollution than HHSEGS would remain online or that electricity demand would be served from natural-gas-fired plants or other technologies with greater environmental impacts.

Other possible alternative sites in the general vicinity of the proposed site were reviewed. As discussed in Section 6.0, none of these alternative locations avoid or minimize any potentially significant environmental impacts of the project. Some alternative segments for the linear facilities (electric and natural gas) were considered, but rejected. They will be addressed in BLM’s EIS document.

Different plant configurations were considered, including development of a 100- or 200-MW plant. It was determined that the impacts of the larger net 500-MW plant would generally be proportionally greater; however, even if the impacts are proportionally greater, the impacts from the net 500-MW HHSEGS will be mitigated below the level of significance. A small or large plant would have some environmental impacts, but neither would create significant environmental impacts. In addition, placing a smaller plant on the site would possibly reduce the potential for other sites to be located in that area. A smaller plant may reduce the

possibility of other plants being able to take advantage of the excellent solar radiation at this location. In addition, California's goals for increased use of renewable power and reduction of carbon sources would not be as well served, including the policy objectives set forth in SB 1078, AB 32, and SBX1-2. The smaller project would not feasibly accomplish most of the basic objectives of the project and would not avoid or substantially lessen one or more of the significant effects.

Several alternative generating technologies were reviewed in a process that led to the selection of a modern, solar power tower arrangement for HHSEGS. Compared to other solar technologies, the BrightSource technology has cost and efficiency advantages. Section 6.0 also discusses other technologies including other concentrating solar plants, conventional oil- and natural gas-fired plants, biomass-fired plants, wind-generation plants, and others reviewed for this AFC. None of these technologies are feasible alternatives to the solar power tower technology selected for HHSEGS.

1.9 Environmental Considerations

Sixteen areas of possible environmental impacts from HHSEGS were investigated. Detailed descriptions and analyses of these areas are presented in Sections 5.1 through 5.16 of this AFC. (The sections are arranged in alphabetical order by technical discipline.) With the implementation of reasonable and feasible mitigation measures, there will be no significant environmental effects. The potential effects of some key areas are summarized briefly in this section.

1.9.1 Air Quality

For purposes of state and federal air quality planning, the Great Basin Unified Air Pollution Control District (GBUAPCD) is in attainment for ozone, nitrogen dioxide, carbon monoxide, and sulfur dioxide with respect to both state and national standards. Inyo County, except for some small areas, is "unclassified" for the federal PM₁₀ (particulate matter less than 10 microns in diameter) standard, and GBUAPCD is a nonattainment area for the state standard. The GBUAPCD is in attainment with the state PM_{2.5} particulate matter less than 2.5 microns in diameter) standard, and is classified as "unclassifiable/attainment" for the federal PM_{2.5} standards.

An assessment of the impact to air quality was performed using detailed air dispersion modeling. On the federal side, because the emissions of all federal Prevention of Significant Deterioration (PSD) program pollutants will be below 100 TPY, and the greenhouse gas (GHG) emissions for HHSEGS will be below the PSD major source threshold of 100,000 tons per year, the project is not subject to PSD review. The HHSEGS boilers will be subject to the federal New Source Performance Standards (NSPS). However, emissions from the boilers will be well below the NSPS limits. The boilers are exempt from the continuous opacity and sulfur oxides monitoring requirements of the NSPS because they will burn only natural gas fuel.

Additionally, the project's emissions are below the levels that require best available control technology or offsets under GBUAPCD regulations. Modeling shows that the project will not result in any significant air quality impacts. In fact, every megawatt-hour generated by the project will displace a megawatt-hour that would otherwise have been generated by a

more traditional (i.e., fossil-fuel-fired) source of electricity. Therefore, the project is expected to result in a net reduction in GHG emissions.

1.9.2 Biological Resources

The construction of HHSEGS would affect natural communities in the project area through the removal of vegetation for permanent facilities and structures and for the temporary disturbances associated with construction. These impacts would result in direct loss of habitat for general and special-status plant and wildlife species. Impacts could occur from removal and crushing of shrubs and herbaceous vegetation (resulting in loss of nesting/breeding and foraging habitat), entombment of animals in dens or burrows, collisions with vehicles, electrocutions, increased predation on sensitive species, disturbance from noise, and fragmentation of habitat. These impacts have the potential to be significant. However, with the implementation of worker awareness training, preconstruction and clearance surveys, avoidance, mitigation and compensation measures proposed by the Applicant and required by the Biological Resources Mitigation Implementation Monitoring Plan and the resource agencies, there will be no significant, unmitigated environmental impacts associated with the construction and operation of HHSEGS.

Impacts on biological resources as a result of construction and operation of HHSEGS are considered less than significant with the incorporation of the proposed mitigation measures. No designated critical habitat for any listed species exists on, or adjacent to, the project area.

1.9.3 Land Use

The Inyo County General Plan and Renewable Energy General Plan Amendment are the primary planning documents applicable to the project site. HHSEGS is located on privately owned land in a Renewable Energy Land Use Designation Overlay zone. Permitted land uses in a Renewable Energy Land Use Designation Overlay zone include renewable energy facilities such as the proposed solar thermal power plant.

The project site is currently zoned as open space with a minimum parcel size of 40 acres (OS-40). However, but for the CEC's exclusive jurisdiction, this project would be permitted by Inyo County pursuant to Title 21, renewable Energy Development, of the Inyo County Development Code, therefore, the development standards of lands zoned as OS-40 would not apply.

Additionally, the project will not divide an established community. It does not lie within critical habitat for the desert tortoise and does not conflict with any habitat conservation plans or natural community conservation plans. It will not convert prime farmland, unique farmland, farmland of statewide importance and will not result in the conversion of farmland subject to the Williamson Act. Therefore, the project will not have any significant land use impacts.

1.9.4 Visual Resources

The physical setting in which the project would be located consists of desert environment that is vegetated with grasses and low-lying scrub bushes. The property is currently undeveloped except for some unpaved roads that cross it which are a remnant of a prior attempt to develop the site for residential use. The closest development is the community of

Charleston View (also known as Calvada Springs) located immediately south of the site boundary.

The HHSEGS project includes two heliostat fields with solar power towers that are 750 feet tall. To assess visual impacts, several key observation points were identified from the surrounding area for further visual analysis. The visual changes brought about by the project would have a less-than-significant effect on the views seen from five of the six key observations points when the levels of change to the visual character and quality of the views are evaluated in light of the small numbers of viewers, the moderate levels of sensitivity, and the fact that the visual changes are consistent with Inyo County's designation of the project site and surrounding area as a Renewable Energy Land Use Designation Overlay District.

The project has the potential to change the existing character and visual quality of the view seen from Charleston View (KOP 4) to the degree that these changes would constitute a significant impact given the moderately high sensitivity of the viewers. However, with application of the proposed mitigation measures, the impacts to the views from Charleston View can be reduced to a level that is less than significant.

1.9.5 Water Resources

The HHSEGS site lies in the Pahrump Valley, a region with mostly very gently to moderately sloping alluvial fans, nearly level basin floor, and dry lake beds. The project area is bounded by Resting Springs and Nopah mountain ranges on the west and northwest, and by the Kingston Range on the south. The bordering mountains within California vary in elevation from approximately 6,400 feet in the Nopah Range to 7,300 feet in the Kingston Range. In bordering Nevada, the Spring Mountains are approximately 11,910 feet above mean sea level and provide the main source of groundwater recharge to the basin. The entire watershed drains into the Pahrump Valley low point to the south of the project site, draining to the northwest and eventually into the dry lake bed northwest of the project site.

The Pahrump Valley Groundwater Basin underlies a northwest-trending valley in southeastern Inyo County. The Pahrump Valley is approximately 30 miles wide by 42 miles long and covers approximately 93,100 acres (145 square miles). The valley is located along the Pahrump Valley Fault Zone and was formed as a "pull-apart" basin. Groundwater is confined near the margins of two dry lakes, Stewart Lake and Pahrump Lake, and along the base of the alluvial deposits emanating from the Spring Mountains in the Nevada portion of the basin. The Pahrump Valley is a drained closed basin with no surface water outflow from the valley. The valley floor is composed of basin fill and alluvial sediments.

The Pahrump Valley has two aquifer systems: the Lower Carbonate aquifer and the Basin Fill aquifer. The Lower Carbonate aquifer originates in the nearby mountain ranges and dips steeply into the subsurface under the valley fill near the edges of the valley. The overlying Basin Fill aquifer underlies the broad, flat floodplain that comprises the central portion of the valley between the adjacent mountain ranges. The Lower Carbonate aquifer has only been tapped by a small number of wells due to the associated expense and the technical difficulties in constructing wells to the necessary depths. Conversely, the majority of the wells in the area tap the Basin Fill aquifer that is accessible to wells several hundred feet in depth. The Basin Fill aquifer is the target groundwater supply source for the Project.

The Basin Fill aquifer is composed of basin fill and alluvial sediments ranging from 650 to over 9,800 feet thick and is the main source of groundwater supply for the Pahrump Valley. In the project vicinity, production wells of approximately 300 to 400 feet in depth would be required to obtain the target yields for the project. The overall quality of the groundwater in the Pahrump Basin is low in total dissolved solids and is suitable for all beneficial uses.

Although inflows exceed pumping in the Pahrump Basin, underflow and evapotranspiration result in an overall net groundwater loss. However, the small amount of pumping from the project is not expected to result in substantial depletions to the existing groundwater resources of the Pahrump Valley. Because the project will use only a small amount of water and all of it will be used and discharged to a treatment process (i.e., none of it will be returned to the groundwater basin), the project is unlikely to affect groundwater quality. No changes in the existing physical or chemical conditions of groundwater resources are expected as a result of the project and no impacts to groundwater quality would occur.

1.10 Cumulative Effects

Each discipline presented in Sections 5.1 through 5.16 considers the cumulative effects of the HHSEGS with other reasonably foreseeable projects within a 20-mile radius. In each discipline, the discussion concludes that the potential impacts on the environment that may result from the incremental impact of the project when added to other past, present, and reasonably foreseeable future actions will not be significant.

The BLM and CEC have stated that the BLM has received right-of-way requests for more than 300,000 acres for the development of approximately 34 large solar thermal power plants totaling 24,000 MW. It is the Applicant's understanding that this large number of applications has raised some public concerns about the potential cumulative effects of solar energy development throughout the desert. However, it is highly improbable that more than a small percentage of these projects will be developed within the next decade for the following reasons. The state mandate to develop renewable energy and solicitations for renewable energy sales by the four major California utilities have spurred interest in solar sites. However, although many proposals are received by the utilities, few result in power sales agreements. In addition, obtaining transmission interconnection, required permits, and financing are serious hurdles, so that only a small number of projects are likely to achieve commercial operation. The CEC's 2006 Integrated Energy Policy Report Update stated that nationwide over half of renewable contracts have failed and that "project delays have affected 94 percent of SCE projects and 72 percent of SDG&E projects."³ Thus, it is unlikely that many of these applications will result in commercial projects.

The right-of-way application to the BLM for the nearby proposed Element Power Solar Project (a photovoltaic project to be located in Nevada) has not yet resulted in a Notice of Intent to conduct a review under the National Environmental Policy Act (NEPA). The 2006 Solar Task Force Report to the Western Governors' Association examined state mandates for renewable energy, state and federal incentives, forecasted electricity load growth, solar resources, transmission, and solar technology capability. The report concluded that

³ 2006 IEPR Update, pp. 30-40

2 gigawatts of central station power would be deployed in California by 2015.⁴ Such a deployment would require approximately 20 to 25 square miles of land (or 12,800 to 16,000 acres). Even if all of the 2 gigawatts of central station power predicted for California were located on BLM land within the California Desert Conservation Area (CDCA), it would use only 0.05 to 0.06 percent of the CDCA's 25 million acres.

1.11 Key Benefits

1.11.1 Environmental

HHSEGS will employ advanced, high-efficiency solar power tower technology. This renewable energy source will provide net 500 MW of dependable power to the grid, generally during the hours of peak power consumption by the interconnecting utilities. Because natural gas will only be used for supplemental heat, air emissions will be minimal. HHSEGS will also minimize groundwater use. Air-cooled condensers will be used to cool the steam and water will be reused in the facility, with an estimated use of no more than 140 acre-feet per year for both solar plants.

1.11.2 Employment

HHSEGS will provide for a peak of approximately 1,033 construction jobs at the site, with an average of 637 construction jobs over the 29-month construction period. In addition, it will provide approximately 110 to 120 full-time, living-wage jobs throughout the life of the project.

1.11.3 Financial

HHSEGS is expected to bring both sales tax and property tax revenue to Inyo County and California. In accordance with California state tax law, HHSEGS qualifies for the exclusion of certain parts from valuation per the Revenue and Taxation Code. Assuming the property tax exemptions apply, Inyo County would receive about \$3.9 million annually in property taxes. This additional property tax revenue would constitute an almost 23 percent increase in the total county taxes received over fiscal year 2010 amounts. As such, the additional property tax revenues generated by the HHSEGS would *significantly benefit* Inyo County.

1.11.4 Renewable Energy

HHSEGS will assist California in repositioning its generation asset portfolio to use more renewable energy and reduce greenhouse gas emissions in conformance with state policies as set forth in SB 1078, AB 32, and SBX 1-2. It will help diversify the state's electricity sources, reducing its dependence on natural gas-fired power plants.

1.12 Persons Who Prepared the AFC

Persons with primary responsibility for the preparation of each section of this AFC are listed in Appendix 1B.

⁴ Solar Task Force Report, January 2006, Western Governors' Association, p. 12

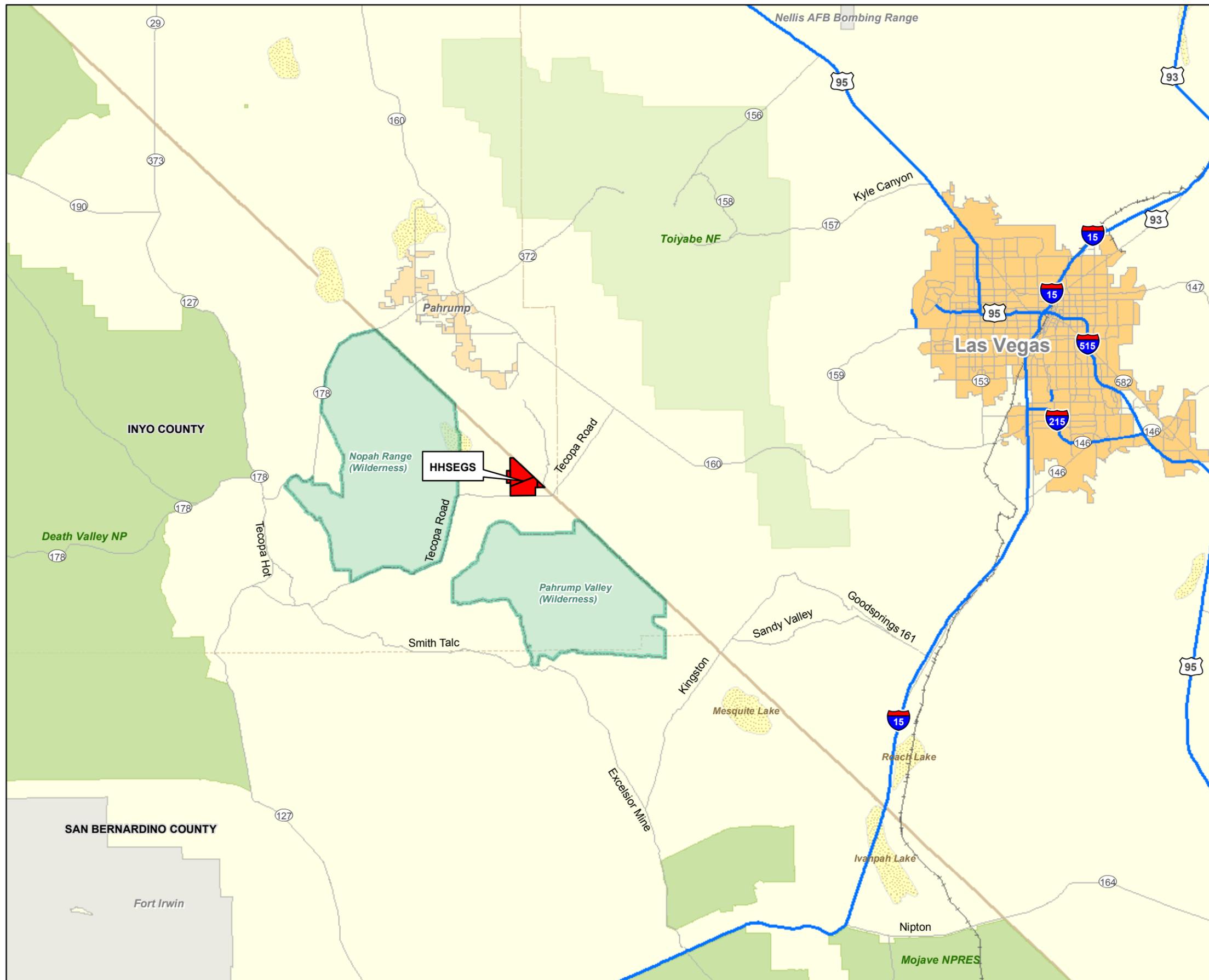
1.13 Laws, Ordinances, Regulations, and Standards

Each section addresses the relevant LORS and addresses compliance with them.

1.14 Permitting Requirements

Each section provides a list of applicable federal, state, and local permits that would be required by each jurisdiction for the project.





- LEGEND
- Major Freeways
 - Major Road
 - State Boundary
 - - - County Boundary
 - + Major Railroad Lines
 - National Parks/ Forests
 - Military Installation
 - Dry Lake
 - Urban Areas
 - Wilderness Area
 - HHSEGS Boundary

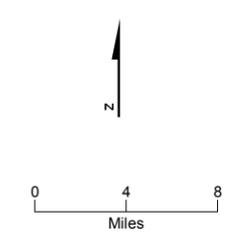
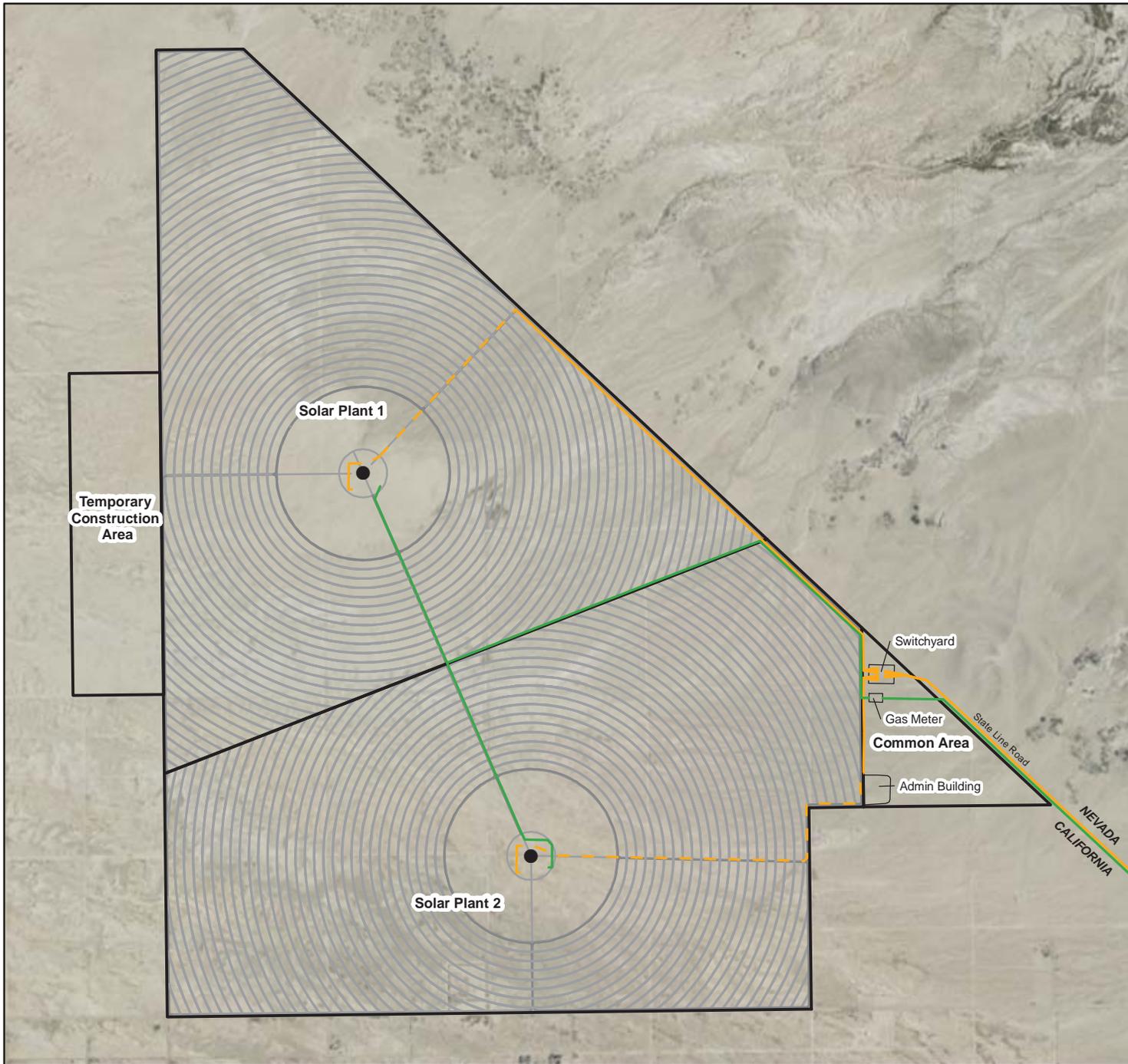


FIGURE 1.2-2
Vicinity Map
 Hidden Hills Solar Electric Generating System



- LEGEND**
- Solar Power Towers
 - Proposed Gasline
 - Transmission Line
 - - - Underground Transmission Line
 - Solar Field Heliostat Arrays
 - Access Roads
 - HHSEGS Boundary

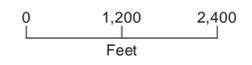
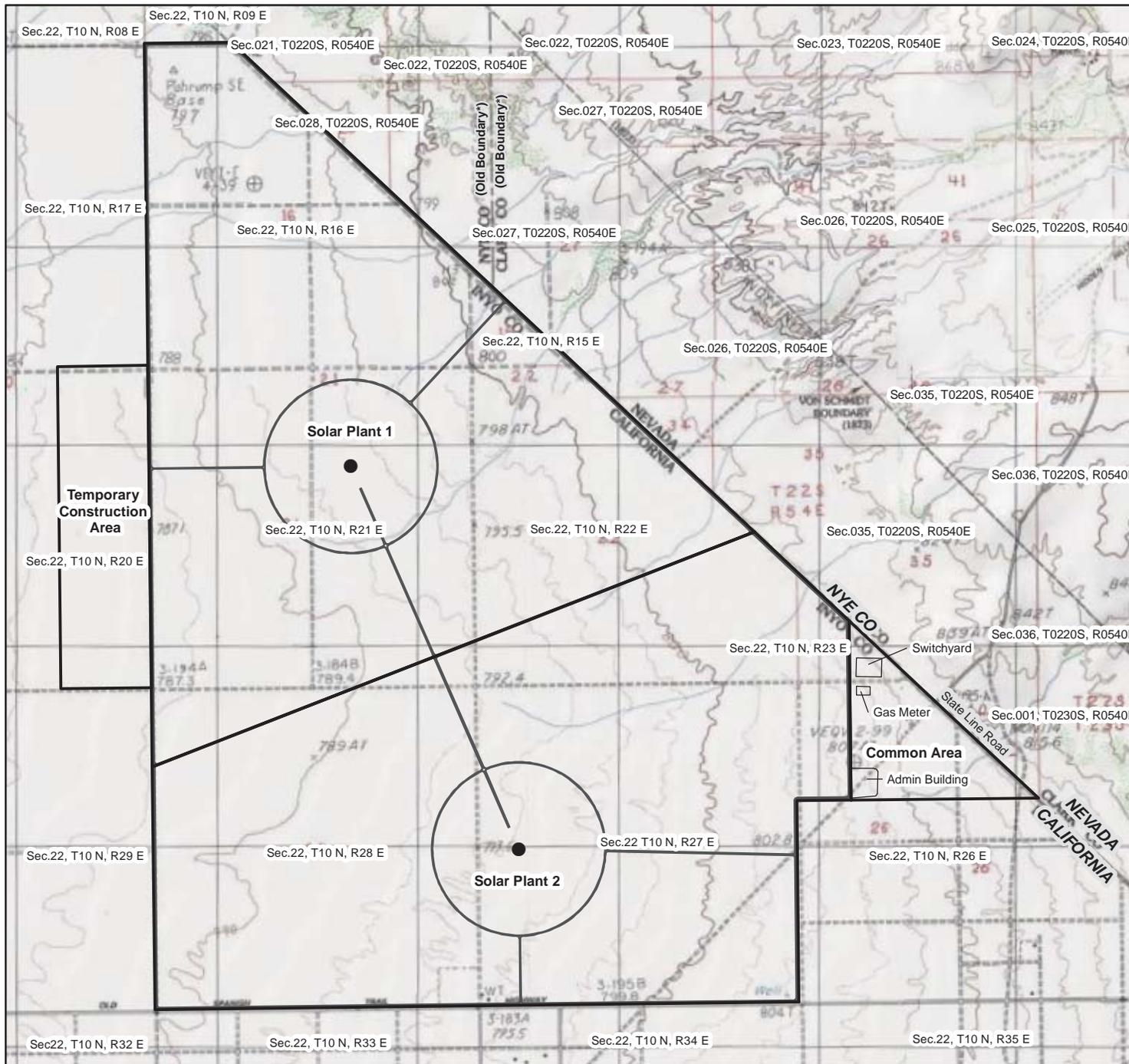


Figure 1.2-3
Site Plan and Linear Facilities
 Hidden Hills Solar Electric Generating System



- LEGEND**
- Solar Power Towers
 - Access Roads
 - ▭ HHSEGS Boundary

*County boundary moved due to annexation, 2001

Figure 1.5-1
Property Boundary
 Hidden Hills Solar Electric Generating System



FIGURE 1.5-2
Appearance of Site Before Construction
Hidden Hills Solar Electric Generating System



FIGURE 1.5-3
Appearance of Site After Construction
Hidden Hills Solar Electric Generating System

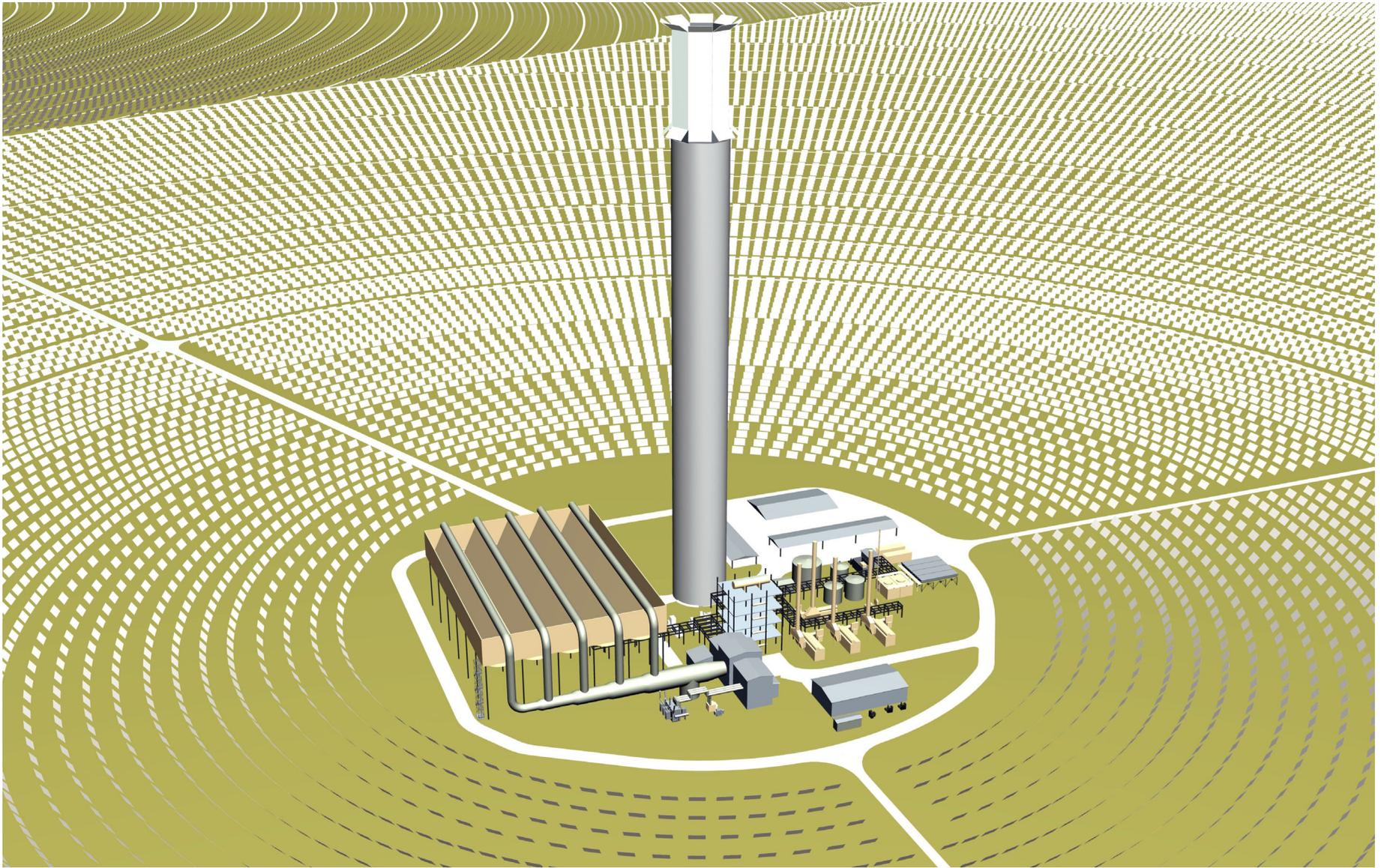


FIGURE 1.5-4
Close-up of Solar Plant 2
Hidden Hills Solar Electric Generating System