

C. Alternatives

This section summarizes the information presented in Appendix 1 to this EIR/EIS, Alternatives Screening Report, which contains detailed documentation and maps of all alternatives suggested for EIR/EIS consideration. This section is organized as follows: Section C.1 is an overview of the alternatives screening process; Section C.2 describes the methodology used for alternatives evaluation; Section C.3 presents a summary of which alternatives have been selected for full EIR/EIS analysis and which have been eliminated based on CEQA criteria; Section C.4 describes the alternatives that have been retained for full EIR/EIS analysis within each individual issue area in Section D; and Section C.5 presents descriptions of each alternative that was eliminated from EIR/EIS analysis and explains why each was eliminated. Section C.6 describes the No Project Alternative.

C.1 Alternatives Development and Screening Process

One of the most important aspects of the environmental review process is the identification and assessment of reasonable alternatives that have the potential for avoiding or minimizing the impacts of a Proposed Project. In addition to mandating consideration of the No Project Alternative, CEQA Guidelines (Section 15126(d)) emphasize the selection of a reasonable range of technically feasible alternatives and adequate assessment of these alternatives to allow for a comparative analysis for consideration by decision-makers. CEQA Guidelines state that the discussion of alternatives shall focus on alternatives capable of eliminating or reducing significant adverse environmental effects of a Proposed Project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. However, CEQA Guidelines declare that an EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote or speculative.

The Proposed Project is described in detail in Section B of this EIR. Appendix 1 describes the alternatives screening analysis that has been conducted for the Proposed Project and provides a record of the screening criteria and results that were reached regarding alternatives carried forward for full EIR/EIS analysis and alternatives eliminated. Appendix 1 documents: (1) the range of alternatives that was suggested and evaluated; (2) the approach and methods used to screen the feasibility of these alternatives according to guidelines established under CEQA; and (3) the results of the alternatives screening. For alternatives that were eliminated from EIR consideration, Appendix 1 explains in detail the rationale for elimination. “Non-wires alternatives”¹ are addressed as well.

Numerous alternatives to the Proposed Project were suggested during the scoping period (October 25 to November 28, 2005 and December 7, 2005 to January 20, 2006) by the general public, and federal, State and local agencies after SCE filed its Application for a CPCN. Other alternatives were developed by EIR/EIS preparers or presented by SCE in its PEA.

In total, the alternatives screening process has culminated in the identification and preliminary screening of 35 potential alternatives. These alternatives range from minor routing adjustments to SCE’s Proposed Project location, to entirely different transmission line routes, to alternative energy technologies, as well as non-wires alternatives.

¹ “Non-wires alternatives” include methods of meeting project objectives that do not require major transmission lines (e.g., baseload generation, distributed generation, renewable energy supplies, conservation and demand-side management, etc.).

C.2 Alternatives Screening Methodology

The evaluation of the alternatives used a screening process that consisted of three steps:

- Step 1:** Clearly define each alternative to allow comparative evaluation
- Step 2:** Evaluate each alternative in comparison with the Proposed Project, using CEQA/NEPA criteria (defined below)
- Step 3:** Based on the results of Step 2, determine the suitability of the each alternative for full analysis in the EIR/EIS. If the alternative is unsuitable, eliminate it from further consideration.

C.2.1 CEQA and NEPA Requirements for Alternatives

After completion of the steps defined above, the advantages and disadvantages of the alternatives are carefully weighed with respect to CEQA and NEPA criteria for consideration of alternatives. Both CEQA and NEPA provide guidance on selecting a reasonable range of alternatives for evaluation in an EIR and EIS, and the requirements are similar. This alternatives screening and evaluation process satisfies both State and federal requirements. The CEQA and NEPA requirements for selection of alternatives are described below.

C.2.1.1 CEQA

An important aspect of EIR preparation is the identification and assessment of reasonable alternatives that have the potential for avoiding or minimizing the impacts of a Proposed Project. In addition to mandating consideration of the No Project Alternative, the State CEQA Guidelines (Section 15126.6(e)) emphasize the selection of a reasonable range of feasible alternatives and adequate assessment of these alternatives to allow for a comparative analysis for consideration by decision-makers. The State CEQA Guidelines (Section 15126.6(a)) state that:

An EIR shall describe a reasonable range of 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, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation.

In order to comply with CEQA's requirements, each alternative that has been suggested or developed for this project has been evaluated in three ways:

- Does the alternative accomplish all or most of the basic project objectives?
- Is the alternative feasible (from economic, environmental, legal, social, technological standpoints)?
- Does the alternative avoid or substantially lessen any significant effects of the Proposed Project (including consideration of whether the alternative itself could create significant effects potentially greater than those of the Proposed Project)?

Each of these bullets is described in more detail in the following sections.

C.2.1.2 Consistency with Project Objectives

The State CEQA Guidelines require the consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may “impede to some degree the attainment of project objectives” (Section 16126.6(b)). Therefore, it is not required that each alternative meet all of SCE’s objectives. In its Proponent’s Environmental Assessment (PEA), SCE has identified the following four objectives for the Proposed Project:

- **Increase California’s Transmission Import Capability.** According to SCE, DPV2 will increase California’s transmission import capability by 1,200 MW providing greater access to sources of low-cost energy currently operating in the Southwest. The Southwest region currently has over 6,000 MW of surplus generation, some of which may be imported into California. The Southwest Transmission Expansion Planning (STEP) working group independently concluded a similar magnitude of generation is available for import into California. Increased access to energy in the Southwest is forecasted to lower total energy costs and substantially benefit California consumers. SCE’s economic analysis concluded that DPV2 provides \$1.1 billion of benefits to California consumers over the life of the project, and has a benefit-to-cost ratio of 1.7:1.
- **Enhance the Competitive Energy Market.** SCE states that it believes it is in California’s interest to encourage investment in new generation infrastructure through the construction of needed high-voltage transmission lines. This is consistent with the *Energy Action Plan II*, which was adopted in September 2005 by the CPUC and the California Energy Commission for California (CPUC & CEC, 2005). Transmission infrastructure is necessary for a competitive market, and is vital to integrating new generation additions (CPUC, 2004). SCE states that DPV2 is expected to enhance competition amongst energy suppliers by increasing access to the California energy market, providing siting incentives for future energy suppliers, and providing additional import capability. Facilitating a competitive energy market in the Southwest may also create employment opportunities, which are beneficial to the economy and industries in Arizona and California.
- **Support the Energy Market in the Southwest.** The Western Electricity Coordinating Council (WECC) transmission system is an interstate regional system (including Northwestern Mexico and Western Canadian provinces) that links power generation resources with customer loads in a complex electrical network. DPV2 will expand this network and increase the ability for California and the Southwest to pool resources for ancillary services, and provide emergency support in the event of generating unit outages or natural disasters.
- **Provide Increased Reliability, Insurance Value, and Operating Flexibility.** DPV2 would improve the reliability of the regional transmission system, providing insurance against major outages such as the loss of a major generating facility or of another high-voltage transmission line.

The CAISO conducted an independent review of DPV2 and also found the DPV2 project to be a necessary and cost-effective addition to the CAISO controlled grid.² The CAISO Board approved the DPV2 project on February 24, 2005 and directed SCE to proceed with the permitting and construction of the transmission project, preferably to be completed by the summer of 2009. However, because the project is designed to provide economic benefits and it is not primarily a reliability enhancement project, SCE did not present a specific project objective related to the date of project operation.

² <http://www.caiso.com/docs/09003a6080/34/e4/09003a608034e440.pdf>.

C.2.1.3 Feasibility

The State CEQA Guidelines (Section 15364) define feasibility as:

. . . capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

The alternatives screening analysis is largely governed by what CEQA terms the “rule of reason,” meaning that the analysis should remain focused, not on every possible eventuality, but rather on the alternatives necessary to permit a reasoned choice. Furthermore, of the alternatives identified, the EIR is expected to fully analyze those alternatives that are feasible, while still meeting most of the project objectives.

According to the State CEQA Guidelines (Section 15126.6(f)(1)), among the factors that may be taken into account when addressing the feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or other regulatory limitations, jurisdictional boundaries, and proponent’s control over alternative sites in determining the range of alternatives to be evaluated in the EIR. For the screening analysis, the feasibility of potential alternatives was assessed taking the following factors into consideration:

- **Economic Feasibility.** Is the alternative so costly that implementation would be prohibitive? The State CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may “impede to some degree the attainment of project objectives or would be more costly” (Guidelines Section 16126.6(b)). The Court of Appeals added in *Goleta Valley v. Board of Supervisors* (2nd Dist. 1988) 197 Cal.App.3d, p. 1181 (see also *Kings County Farm Bureau v. City of Hanford* (5th Dist. 1990) 221 Cal.App.3d 692, 736 [270 Cal. Rptr. 650]): “[t]he fact that an alternative may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible. What is required is evidence that the additional costs or lost profitability are *sufficiently severe* as to render it *impractical* to proceed with project.”
- **Environmental Feasibility.** Would implementation of the alternative cause substantially greater environmental damage than the Proposed Project, thereby making the alternative clearly inferior from an environmental standpoint? This issue is primarily addressed in terms of the alternative’s potential to eliminate significant effects of the Proposed Project, as discussed in Section 2.2.1.3 below.
- **Legal Feasibility.** Does the alternative have the potential to avoid lands that have legal protection that may prohibit or substantially limit the feasibility of permitting a high voltage transmission line?
- **Regulatory Feasibility.** Do regulatory restrictions substantially limit the likelihood of successful permitting of a high-voltage transmission line? Is the alternative consistent with regulatory standards for transmission system design, operation, and maintenance?

Lands that are afforded legal protections that would prohibit the construction of the project, or require an act of Congress for permitting, are considered less feasible locations for the project. These land use designations include wilderness areas, wilderness study areas, restricted military bases, airports and Indian reservations. Information on potential legal constraints of each alternative has been compiled from laws, regulations, and local jurisdictions, as well as a review of federal, State, and local agency land management plans and policies.

- **Social Feasibility.** Would the alternative cause significant damage to the socioeconomic structure of the community and be inconsistent with important community values and needs? Similar to the environmental

feasibility addressed above, this subject is primarily considered in consideration of significant environmental effects.

- **Technical Feasibility.** Is the alternative feasible from a technological perspective, considering available technology? Are there any construction, operation, or maintenance constraints that cannot be overcome?

C.2.1.4 Potential to Eliminate Significant Environmental Effects

A key CEQA requirement for an alternative is that it must have the potential to “avoid or substantially lessen any of the significant effects of the project” (State CEQA Guidelines Section 16126.6(a)). If an alternative is identified that clearly does not have the potential to provide an overall environmental advantage as compared to the Proposed Project, it is usually eliminated from further consideration. At the screening stage, it is not possible to evaluate all of the impacts of the alternatives in comparison to the Proposed Project with absolute certainty, nor is it possible to quantify impacts. However, it is possible to identify elements of an alternative that are likely to be the sources of impact and to relate them, to the extent possible, to general conditions in the subject area.

Table Ap.1-1 in Appendix 1 presents a summary of the potential significant effects of the Proposed Project. This impact summary was prepared prior to completion of the EIR/EIS analysis, so it may not be complete in comparison to the detailed analysis now presented in Section D of this EIR/EIS. However, the impacts in the table are representative of those resulting from preliminary EIR/EIS preparation and were therefore used to determine whether an alternative met this CEQA requirement.

C.2.2 NEPA

According to the Council on Environmental Quality’s (CEQ) NEPA Regulations (40 C.F.R. 1502.14), an EIS must present the environmental impacts of the proposed action and alternatives in comparative form, defining the issues and providing a clear basis for choice by decision-makers and the public. The alternatives section shall:

- a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.
- c) Include reasonable alternatives not within the jurisdiction of the lead agency.
- d) Include the alternative of no action.
- e) Identify the agency’s preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.
- f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

The CEQ has stated that “[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense rather than simply desirable from the standpoint of the applicant” (CEQ, 1983).

In addition to the CEQ NEPA regulations, CEQ has issued a variety of general guidance memoranda and reports that concern the implementation of NEPA. One of the most frequently cited resources for NEPA practice is CEQ's *Forty Most Asked Questions Concerning CEQ's NEPA Regulations* (Forty Questions). Although a reviewing federal court does not always give the Forty Questions the same deference as it does the CEQ NEPA Regulations, in some situations the Forty Questions have been persuasive to the judiciary. For example in one decision, a federal court relied heavily on one of the Forty Questions in interpreting the treatment of alternatives under NEPA [*American Rivers et al. v. Federal Energy Regulatory Commission*, 187 F.3d 1007 (9th Cir. 1999)] (Bass et al., 2001).

In general, alternatives are discussed in Forty Questions Nos. 1 through 7. Question No. 5b asks if the analysis of the “proposed action” in an EIS is to be treated differently than the analysis of alternatives. The response states:

The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the “proposed action.” Section 1502.14 is titled “Alternatives, including the proposed action” to reflect such comparable treatment. Section 1502.14(b) specifically requires “substantial treatment” in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives.

NEPA (40 C.F.R. 1502.14(c)) also requires the consideration of the No Action Alternative as a basis for comparison even if it would not satisfy the proposed action's purpose and need. The definition of the No Action Alternative depends on the nature of the project and in the case of the proposed DPV2 project the No Action Alternative describes what would occur without the federal agency's (BLM) approval.

C.2.2.1 Consistency with Purpose and Need

CEQ NEPA Regulations (40 C.F.R. 1502.13) require a statement “briefly specifying the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” In addition to the project objectives defined in Section C.2.1.2 above, SCE's PEA presents the following statement regarding the purpose and need for the DPV2 project:

Californians have learned from painful experience during the 2000-2001 electricity crisis that the market for electricity in California is susceptible to volatile commodity prices, the exercise of market power, and the risk of supply shortages. Development of new transmission facilities to gain greater access to generation may help California avoid or limit similar experiences. Additionally, development of new transmission facilities to areas where generation has been more easily sited and constructed may spur development of new competitive generation to provide further insurance against future electricity crises.

C.2.2.2 Feasibility

The environmental consequences of the alternatives, including the proposed action, are to be discussed in the EIR/EIS in accordance with CEQ NEPA Regulations (40 C.F.R. 1502.16). The discussion shall include “Possible conflicts between the proposed action and the objectives of federal, regional, State, and local land use plans, policies and controls for the area concerned.” Other feasibility factors to be considered may include cost, logistics, technology, and social, environmental, and legal factors (Bass et al., 2001). The feasibility factors are substantially the same as described for CEQA in Section C.2.1.3, above.

C.2.3 Summary of CEQA and NEPA Screening Methodology

Unlike CEQA's requirements, NEPA does not require screening of alternatives based on their potential to avoid or lessen significant environmental effects. However, to ensure that the alternatives considered in the EIR/EIS would meet the requirements of both CEQA and NEPA, the stricter requirements of CEQA have been applied as the screening methodology. As such, a reasonable range of alternatives has been considered and evaluated as to whether or not the alternatives meet (1) most of the project objectives/purpose and need, (2) are considered feasible, and (3) would avoid or substantially lessen any significant effects of the Proposed Project.

C.2.4 Other Considerations for Alternatives

The final project decision by the CPUC will be guided by the Public Utilities Code in addition to the requirements of CEQA. The Public Utilities Code in Section 1002 states that:

Section 1002. (a) The commission, as a basis for granting any certificate pursuant to Section 1001 shall give consideration to the following factors:

(1) Community values.

(2) Recreational and park areas.

(3) Historical and aesthetic values.

(4) Influence on environment, except that in the case of any line, plant, or system or extension thereof located in another state which will be subject to environmental impact review pursuant to the National Environmental Policy Act of 1969 (Chapter 55 (commencing with Section 4321) of Title 42 of the United States Code) or similar state laws in the other state, the commission shall not consider influence on the environment unless any emissions or discharges therefrom would have a significant influence on the environment of this state.

The CPUC will consider the "community values" as expressed in the CPUC's proceeding on the DPV2 project and in comments on the Draft EIR/EIS. The CPUC anticipates that the final decision will represent a reasonable balancing of the communities' interests, the need to protect environmental resources in the area, and the need for the project.

C.3 Summary of Screening Results

Alternatives identified by the Applicant, agencies, EIR/EIS preparers, and the public are listed below according to the determination made for analysis. Alternatives considered included alternative route alignments and other transmission alternatives, alternatives that could replace the Proposed Project as a whole, non-wire alternatives, and the No Project Alternative. If so desired, in its decision, the CPUC could elect to combine or match certain alternatives and project components. The potential to create different permutations of alternatives in reality creates many more overall alternatives.

C.3.1 Alternatives Fully Analyzed in the EIR/EIS

The alternatives listed below have been chosen for detailed analysis in this EIR/EIS through the alternative screening process. These alternatives are briefly described in Section C.4 and in greater detail in Section 4 of Appendix 1. The preliminary conclusions generated during the screening process are pre-

sented briefly below and each of these alternatives is evaluated within each environmental issue area of Part D of this EIR. The alternatives are illustrated on Figures C-1a and C-1b; an individual map of each alternative is presented in Section 4 of Appendix 1 of this EIR/EIS.

Devers-Harquahala Route Alternatives

- SCE Harquahala-West Alternative
- SCE Palo Verde Alternative
- Harquahala Junction Switchyard Alternative
- Alligator Rock Alternatives:
 - Alligator Rock–North of Desert Center Alternative
 - Alligator Rock–Blythe Energy Transmission Route Alternative
 - Alligator Rock–South of I-10 Frontage Alternative

West of Devers Alternatives

- Devers-Valley No. 2 Alternative

Other Project Alternatives

- Desert Southwest Transmission Project Alternative

C.3.2 Alternatives Eliminated from Full Consideration in the EIR/EIS

This EIR/EIS presents two categories of alternatives eliminated from detailed EIR/EIS consideration. Certain alternatives were eliminated because they clearly did not meet project objectives or were infeasible; these alternatives are listed below and described briefly in Section 3.2.1 of Appendix 1 of this EIR/EIS. Other alternatives required more detailed consideration in order to determine whether they should be eliminated; these are listed below as well and are described in Section C.5 and in greater detail in Section 4 of Appendix 1 of this EIR/EIS.

The following 11 alternatives were eliminated after a preliminary alternatives screening process (see Section 3.2.1 of Appendix 1):

- EOR 9000+ Project
- Granite Construction Company
- New 230 kV Line West of Devers
- Southwest Power Link 500 kV No. 2 Transmission Line
- Path 49 Upgrade Project
- New Imperial Valley–Devers 500 kV Transmission Line
- Double-Circuit 500 kV Line (Devers-Harquahala)
- New Devers–Mira Loma 500 kV Transmission Line
- Combination of New Imperial Valley–Devers 500 kV Line and Path 49 Upgrade Project
- Modify DPV1 Compensation
- Alligator Rock–South of DPV2 Corridor Alternative

The alternatives listed below were also eliminated from consideration in the EIR/EIS; they are described and the reasons for their elimination are presented in Section C.5 below and more detailed descriptions are in Section 4 of Appendix 1. Figures C-2a and C-2b depict the alternatives eliminated from consideration. Individual maps of most alternatives are presented in Section 4 of Appendix 1 of this EIR/EIS.

Figure C-1a. Alternatives Analyzed (Arizona)
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Figure C-1b. Alternatives Analyzed (California)
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Figure C-2a. Alternatives Eliminated (Arizona)
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Figure C-2b. Alternatives Eliminated (California)
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Devers-Harquahala Route Alternatives

- SCE North of Kofa NWR–South of I-10 Alternative
- SCE North of Kofa NWR–North of I-10 Alternative
- North of Kofa NWR Alternative
- SCE North of Blythe Alternative
- SCE South of Blythe Alternative
- Paradise Valley Alternative
- Substation Alternatives
 - Mesa Verde Substation Alternative
 - Wiley Well Substation Alternative

West of Devers Alternatives

- North of Existing Morongo Corridor Alternative
- Composite Conductor Alternative

Other Project Alternatives

- Convert DPV1 from AC to HVDC Transmission Line
- Underground Alternative

Non-Transmission Alternatives

- New Conventional Generation
- Renewable Generation Resources
- Conservation and Demand-Side Management
- Distributed Generation

C.4 Alternatives Evaluated in this EIR/EIS

C.4.1 Introduction

As discussed in Section C.2, alternatives were assessed for their feasibility, their ability to reasonably achieve the project objectives, and their potential for reducing the significant environmental impacts of the Proposed Project. Based on these screening criteria, the following alternatives were selected for detailed analysis within this EIR/EIS.

C.4.2 Transmission Line Route Alternatives: Devers-Harquahala

C.4.2.1 SCE Harquahala-West Alternative

Description

As described in SCE’s 2005 PEA, the “Harquahala-West Subalternate Route” would begin at the Harquahala Generating Station Switchyard. Rather than departing the Harquahala Switchyard to the east paralleling the existing Harquahala-Hassayampa 500 kV towers, the Harquahala-West Alternative would depart the Harquahala Generating Station Switchyard to the west and follow section lines due west for approximately 12 miles through private and State lands to the El Paso Natural Gas Pipeline utility corridor. This portion of the route parallels Courthouse Road approximately one mile to the north along section lines to the pipeline corridor. At the pipeline corridor, the transmission line would proceed

northwesterly along the pipeline corridor for approximately 9 miles to the intersection with the DPV1 transmission line, immediately north of the El Paso Wendon Pump Station. The length of the Harquahala-West Alternative between the Harquahala Switchyard and the junction with the DPV1 line and the proposed route is 21 miles. This alternative is illustrated in Figure Ap.1-1 in Appendix 1 of this EIR/EIS, as well as Figure C-1.

Currently, Arizona Public Service Company (APS) is planning for the Palo Verde Hub to TS-5 500 kV transmission line that may parallel DPV1 between the PVNGS interconnection area and the Central Arizona Project (CAP) Canal. SCE originally developed the Harquahala-West Alternative because of a concern that the Palo Verde Hub to TS-5 line may be constructed in a manner that would preclude SCE from entering Harquahala Generating Station switchyard from the east. In this case, the Harquahala-West Alternative, which would enter Harquahala Generating Station switchyard from the west, may become SCE's preferred route. The Certificate of Environmental Compatibility for the APS PV Hub to TS-5 Project was approved by the Arizona Corporation Commission on August 17, 2005 (Case 128).

Even though the final construction plan has not been determined, SCE has stated that the approval of the APS project should not affect the DPV2 project since the two projects are independent of one another unless it reaches the joint party agreement with New Harquahala Generating Company (HGC) and APS. If a joint agreement were to occur then the Harquahala Junction Switchyard could serve as the eastern termination point for the Proposed Project. Terminating the proposed DPV2 project at the proposed Harquahala Junction Switchyard would require SCE to acquire from HGC that portion of the Harquahala-Hassayampa transmission line between the proposed Harquahala Junction Switchyard and Hassayampa Switchyard to complete DPV2 (this is currently proposed as part of SCE's project), and the existing Harquahala-Hassayampa transmission line would also need to be shared by APS to complete the TS-5 Project.

The portion of the Harquahala-West Alternative that follows the pipeline corridor would be located in a designated BLM Utility Corridor. New right-of-way would need to be acquired across private, State, and BLM land. The Harquahala-West Alternative would be constructed using tubular steel pole structures from the Harquahala Generating Station to the Centennial Wash to reduce the affected ground area across farmland. Steel lattice towers (like those used for DPV1) would be used for the portion of the route across desert land west of Centennial Wash to the intersection with DPV1 at the Wendon Pump Station.

Spur roads would be built from the existing access road along the pipeline for construction of towers, and a new access road would be required along the section lines between the Harquahala Switchyard and the pipeline road. A minimum of 160-foot-wide right-of-way would need to be acquired on BLM land, and a minimum 200-foot-wide right-of-way would need to be acquired on State and private land. Also, construction of a new access road for a portion of the alternative would be required, causing about 5.28 acres more ground disturbance than the proposed Devers-Harquahala route.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Harquahala-West Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. After analysis of the land acquisition process following permitting and confirmation that the route would not be affected by the TS-5 project, the Harquahala-West Alternative was found to be feasible. No technical, regulatory, or legal feasibility concerns exist.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Alternative Length.** The Harquahala-West Alternative would be 14 miles shorter than the proposed route (a total distance of 216 miles versus 230 miles for the 500 kV segment of the Proposed Project), and would require about 48 fewer 500 kV towers than the proposed route, thereby eliminating the temporary and permanent impacts associated with construction of those additional towers.
- **Biological Resources.** This alternative would be almost 5 miles farther south of Burnt Mountain, which contains suitable habitat for the federally listed³ cactus ferruginous pygmy-owl.
- **Recreation.** The alternative would avoid the Proposed Project’s visual and recreational impacts to the Big Horn Mountains Wilderness Area (WA) north of I-10.
- **Agricultural Resources.** The Harquahala-West Alternative would also avoid approximately 1 mile of impacts to agricultural resources along Thomas Road resulting from the Proposed Project.
- **Visual Resources and Transportation.** The alternative would eliminate visual and transportation impacts associated with Proposed Project’s two crossings of I-10.

C.4.2.2 SCE Palo Verde Alternative

Description

The proposed DPV2 route for the Devers-Harquahala 500 kV transmission line is generally parallel to SCE’s existing 500 kV DPV1 transmission line. However, the DPV2 route differs from DPV1 in that the Proposed Project would not terminate at the Palo Verde Nuclear Generating Station (PVNGS). DPV2 as currently proposed involves building a new 500 kV transmission line from Devers to the Harquahala Generating Station switchyard, and then acquiring the existing Harquahala-Hassayampa 500 kV transmission line. Under the Palo Verde Alternative, the DPV2 line would terminate at the PVNGS Switchyard.

As presented in the 2005 PEA, the Palo Verde Alternative would require construction of a new 500 kV transmission line parallel to the DPV1 transmission line for an additional approximately 14.7 miles to the PVNGS switchyard. This alternative would avoid the need to construct the proposed 5-mile segment from the Harquahala Generating Station Switchyard to the Harquahala Junction. A diagram of the proposed and alternative route construction configurations is shown on Figure C-1a, as well as Figure Ap.1-1 in Appendix 1 of this EIR/EIS. Rather than leave the existing DPV1 transmission corridor and follow the existing Harquahala-Hassayampa 500 kV transmission line west to the Harquahala Switchyard, this alternative route would cross from the western side of the DPV1 transmission line to the east, and continue south, parallel to the existing DPV1 and Harquahala-Hassayampa 500 kV lines. The alternative would cross predominantly BLM land to the southeast past Saddle Mountain, and would follow the DPV1 transmission line to the PVNGS Switchyard.

The Certificate of Environmental Compatibility for the Arizona Public Service (APS) PV Hub to TS-5 Project was approved by the Arizona Corporation Commission on August 17, 2005 (Case 128). However, the approval of the APS project does not affect the DPV2 project. If the Palo Verde Alternative were constructed before the southern portion of the PV Hub to TS-5 Project was constructed, it

³ The Federal Endangered Species Act of 1973, as amended, requires all federal agencies to consider “listed” species in their planning efforts and to take positive actions to further the conservation of these species.

would take the “first position” east of the existing DPV1 line, or vice versa. In either case, both lines would be constructed within a 1,000-foot-wide corridor located east of the existing DPV1 line if that portion of the DPV2 line were to be needed.

For the Palo Verde Alternative, SCE would lease bandwidth from APS and Salt River Project (SRP) between Black Peak Communication Site and PVNGS to support the primary protection circuits.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Palo Verde Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. After analysis of the land acquisition process following permitting and confirmation that the route would not be affected by the TS-5 project, the Palo Verde Alternative was found to be feasible. No technical, regulatory, or legal feasibility concerns exist.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources.** Because one mile of agricultural land would be avoided with this alternative, potential impacts to burrowing owls located in the agricultural lands would be reduced.
- **Agricultural Resources.** The Palo Verde Alternative would avoid approximately one mile of agricultural land that would be crossed by the Proposed Project where construction and operation could interfere with agricultural operations.

C.4.2.3 Harquahala Junction Switchyard Alternative

Description

This alternative would require construction of a new switching station east of the Harquahala Generating Station, at the point where the existing Harquahala-Hassayampa and DPV1 transmission lines diverge (a location called “Harquahala Junction”). This alternative would avoid the need to construct the 5-mile segment of the Proposed Project from Harquahala Junction to the Harquahala Generating Station Switchyard. Under this alternative, the Harquahala Junction Switchyard would be built on a site of between 6 and 40 acres in the southwest quarter of Section 25, Township 2 North, Range 8 West, near the intersection of 451st Avenue and the Thomas Road alignment in unincorporated Maricopa County, Arizona. The land is undisturbed desert open space and this alternative is illustrated in Figure Ap.1-1 and Ap.1-1a in Appendix 1 of this EIR/EIS, as well as Figure C-1a.

If the Harquahala Junction Switchyard were constructed, it would serve as the eastern termination point for the Proposed Project. Terminating the proposed DPV2 project at the proposed Harquahala Junction Switchyard would require SCE to acquire from New Harquahala Generating Company (HGC) that portion of the Harquahala-Hassayampa transmission line between the proposed Harquahala Junction Switchyard and Hassayampa Switchyard to complete DPV2 (this is currently proposed as part of SCE’s project), and the existing Harquahala-Hassayampa transmission line would also need to be shared by APS to complete the TS-5 Project.

In the event the parties reach an agreement and the Harquahala Junction Switchyard Alternative is pursued, the three parties would share the existing Harquahala Junction–Hassayampa transmission line and possibly share the Harquahala Junction Switchyard. This would provide SCE with access to the

Hassayampa area, which would obviate the need for the SCE Palo Verde Alternative. The Harquahala Junction Switchyard might also need to be shared by SCE, APS, and HGC.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. Under this alternative, SCE would need to enter into an agreement with HGC and APS in order to acquire the portion of the existing Harquahala-Hassayampa transmission line between the proposed Harquahala Junction Switchyard and Hassayampa Switchyard in order to complete DPV2 and achieve the DPV2 project objectives. If a successful agreement can be established, the Harquahala Junction Switchyard Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The Harquahala Junction Switchyard Alternative would be both technically and legally feasible. The ACC's approval of the PV Hub to TS-5 Project, including an option for APS to build the Harquahala Junction Switchyard indicates that if APS chooses not to build the switching station, that this alternative would be feasible from a regulatory perspective. If APS decides not to build the Harquahala Junction Switchyard as a part of that project, SCE could pursue construction of the switchyard by seeking a similar approval by the ACC. Otherwise, if APS builds the switchyard itself then this alternative could not feasibly be build by SCE.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Ground Disturbance.** Eliminating or deferring the need for almost 20 total miles of new 500 kV transmission line segments would reduce the impacts of short-term construction and ground disturbance as well as impacts to permanent habitat and vegetation removal and the conversion of farmland.
- **Biological Resources.** This alternative would eliminate impacts to the agricultural lands that would be crossed between Harquahala Junction and Harquahala Substation with the proposed route. These agricultural lands could also be habitat for biological resources, such as the burrowing owl. Impacts to the federally protected cactus ferruginous pygmy-owls and/or its habitat, which is also historically known to occur in the area east of Harquahala Substation to PVNGS, would be reduced due to the elimination or deferral of almost 20 miles of new 500 kV transmission lines.

C.4.2.4 Alligator Rock Alternatives

There are three potential reroutes around the Alligator Rock area that may reduce impacts to cultural resources; they are described in the following sections. A fourth route is addressed in Section 3.2.1.11 of Appendix 1 of this EIR/EIS and was eliminated after preliminary screening. The Alligator Rock alternatives are illustrated in Figure Ap.1-5 in Appendix 1 of this EIR/EIS, as well as Figure C-1.

C.4.2.4.1 Alligator Rock–North of Desert Center Alternative

Description

Approximately 5 miles east of Desert Center (between MPs 149 and 150), the Alligator Rock–North of Desert Center Alternative route would diverge from the Proposed Project route and would head northwest for approximately 1.5 miles before crossing I-10 to the north and continuing for 1.1 miles to an unnamed east-west dirt road along the section line. The route would then turn to the west and would parallel the roadway for approximately 1.4 miles before turning again to the northwest for 0.6 miles. The route would then turn west along another east-west section line, staying just within BLM land (north of private

land at Desert Center) for another 0.6 miles before heading southwest for 1.5 miles to Ragsdale Road. The route would parallel Ragsdale Road and I-10 to the north for 3.6 miles before crossing back to the south of Ragsdale Road and I-10 to rejoining the proposed route 1.5 miles later. The 11.8-mile route would be entirely on BLM land. The Proposed Project for this segment would be 10.6 miles long.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Alligator Rock–North of Desert Center Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be located mostly on BLM land but would not require amendments to Resource Management Plans. This alternative is regulatorily, technically, and legally feasible.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources.** This alternative would be preferred over the Proposed Project because the habitat is somewhat more degraded and because of the higher level of human disturbance. The density/distribution of desert tortoise along this route is likely to be less than the other Alligator Rock Alternatives and the Proposed Project.
- **Cultural Resources.** This alternative would avoid a central portion of Alligator Rock ACEC, the 7,726-acre area of archaeological significance that would be affected by the Proposed Project. A survey of this route was completed by the EIR/EIS team, and a total of 16 sites (isolated artifacts are not eligible for the NRHP) were identified along this alternative route. Unlike the high value sites along the Proposed Project through the ACEC, most of these sites are so small that they could easily be avoided during construction.

C.4.2.4.2 Alligator Rock–Blythe Energy Transmission Route Alternative

Description

This route would diverge from the Proposed Project route and avoid much of the Alligator Rock ACEC by following its northern edge near I-10. This alternative would follow the proposed Blythe Energy Project Transmission Line Project (BEPTL) by diverging from DPV1 to the north bringing this new alignment close to Aztec Avenue, an existing El Paso Natural Gas Pipeline/access road, which would be used for construction access. Because the proposed new alignment would be close to the pipeline access road, each of the spur roads to the tower sites would be from this existing access road.

The alternative would diverge approximately 3.5 miles east of Desert Center at the point where the DPV1/DPV2 line turns west-southeast (MP 151). The route would continue northwest towards I-10 paralleling Aztec Avenue for approximately 2.25 miles before turning west and paralleling the southern side of I-10 as well as Aztec Avenue for 1.0 mile. At this point the route would turn back toward the Proposed Project to the southwest and would parallel an access road along the eastern side of Alligator Rock for approximately 1.35 miles to where it would rejoin the proposed DPV2 project at MP 155. The alternative route would be approximately 4.6 miles long and the Proposed Project would be approximately 3.95 miles long in the same segment.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Alligator Rock–Blythe Energy Transmission Route Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be located mostly on BLM land but would not require amendments to Resource Management Plans. This alternative is regulatorily, technically, and legally feasible.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources.** This alternative is located closer to I-10, in habitat that is more disturbed than the areas located in the route of the Proposed Project. Since this alternative traverses more disturbed habitat, there may be a reduced likelihood that special status plant and wildlife species occur, such as the desert tortoise.
- **Cultural Resources.** This alternative would avoid a central portion of Alligator Rock ACEC (7,726-acre area of archaeological significance). This route would avoid the North Chuckwalla Mountains Petroglyph (“rock art”) NRHP District, which is within the Alligator Rock ACEC, and North Chuckwalla Mountain Quarry District. As well, it would avoid impacts to two very significant prehistoric trails and three prehistoric rock ring sites. It is likely that there are other trail segments in this corridor, as well as lithic scatters, possibly rock rings, and likely remains from Patton’s Desert Training Center activities. Like the Proposed Project, there are existing access roads and utility corridors. Most of the significant features within the archaeological sites in the ACEC could probably be avoided during construction, through careful routing of stub roads and tower placement.

C.4.2.4.3 Alligator Rock–South of I-10 Frontage Alternative

Description

This alternative route is the same as the route proposed for the Desert Southwest Transmission Project (see Section C.4.4). The South of I-10 Frontage Alternative would diverge from the Proposed Project approximately 3.5 miles east of Desert Center and would follow the Alligator Rock–Blythe Energy Transmission Route Alternative route for 3.25 miles to the point at which the BEPTL Alternative turns southwest, just east of Alligator Rock. After passing between the northern end of Alligator Rock and the I-10 itself, this alternative would continue in a westerly direction, immediately south of I-10 and Aztec Avenue for 6.5 miles. It would rejoin the Proposed Project route between MP 160 and 161. The Alligator Rock–South of I-10 Frontage Alternative would be 9.77 miles long and the proposed route would be 9.2 miles long in the equivalent segment.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The Alligator Rock–South of I-10 Frontage Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be technically, legally, and regulatorily feasible. Analysis performed for the Desert Southwest Transmission Project (DSWTP) Final EIS has stated that there would be adequate space in the ROW for the construction of a 500 kV line adjacent to the El Paso Natural Gas Pipeline between Alligator Rock and I-10 (BLM & IID, 2005). However, if DSWTP were built prior to DPV2, then there could be space constraints; it is unlikely that there is adequate space for two 500 kV

lines to be installed in addition to the existing natural gas pipeline in the narrow area between the north end of Alligator Rock and I-10.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources.** The habitat along the south side of Interstate 10 is more disturbed than the habitat that lies further south (within the ACEC) because of traffic mortality and flood control devices installed and maintained by Caltrans. The amount of human disturbance is generally highest near the freeway and lessens as one proceeds south toward the hills. The Greystone/Alice Karl and Associates report (2005) also showed that there was less tortoise sign present along this alternative route than the Proposed Project, and approximately the same amount as the Blythe Energy Project route. Since this alternative is closer to I-10, it would most likely be located in an area with less potential for desert tortoise impacts.
- **Cultural Resources.** This alternative would avoid a central portion of Alligator Rock ACEC (7,726-acre area of archaeological significance). A total of 15 sites have been identified within this alternative route corridor; however, most are NRHP-ineligible, or are so small that avoidance is easily feasible. Project impacts could possibly occur at the following five sites: P33-13648 (the series of rock cairns and lithic scatters, discussed above); CA-RIV-1815 (rock rings with lithic scatters); CA-RIV-1816 (rock ring with lithic scatter); CA-RIV-1173 (Desert Steve’s memorial); and CA-RIV-1383 (the North Chuckwalla National Register Petroglyph District). Tower placement could result in avoidance to impacts at the first four sites. While some impacts within the National Register District may be unavoidable, the Proposed Project would also pass through this area with more severe effects. Therefore, the Proposed Project segment is more sensitive, with two National Register Districts and several other potentially NRHP-eligible sites, whereas the South of I-10 Alternative crosses one National Register District and a few other potentially NRHP-eligible sites.

C.4.3 Transmission Line Route Alternatives: West of Devers

C.4.3.1 Devers-Valley No. 2 Alternative

Description

The Devers-Valley No. 2 Alternative (D-V Alternative) would be a new 41.6-mile 500 kV line following the existing SCE Devers-Valley No. 1 500 kV transmission line corridor (see Figure Ap.1-8 in Appendix 1 of this EIR/EIS, as well as Figure C-1). The route would traverse a small portion of the San Bernardino National Forest (SBNF) and the Santa Rosa and San Jacinto Mountains National Monument (National Monument). It would cross the Pacific Crest National Scenic Trail (PCT). In addition to a Special Use Easement and depending on determinations made by the USDA Forest Service, use of this alternative route may require amendments to the SBNF Land Management Plan, the National Monument Proposed Management Plan, and an existing MOU between BLM, Forest Service, and the Pacific Crest Trail Association (PCTA). While a portion of the corridor is within a designated wilderness area, the SCE transmission corridor was specifically excluded from wilderness by Congress (see detail in Section 4.3.1 in Appendix 1).

As shown in Figure Ap.1-9 in Appendix 1 of this EIR/EIS, construction of this alternative would require the expansion of the Devers Substation to the northeast, into an area already owned by SCE and currently disturbed, but not graveled.

Route Description

Devers Substation to Highway 111. The alternative would depart the Devers Substation and head west along the Devers-Valley (D-V) No. 1 500 kV transmission line corridor, with each new alternative tower being located about 130 feet south of the existing D-V towers, where feasible. In relatively flat areas, SCE states that it will attempt to locate the new Devers-Valley towers adjacent to existing structures. However, this not always feasible due to topography, line crossings, varying span lengths due to angle points, and increased tower heights due to higher line ratings. In hilly or mountainous terrain, tower locations are generally dictated by terrain features and tower-for-tower spotting is not feasible.

For the first 2.7 miles out of the Devers Substation, the existing D-V line, the D-V No. 2 Alternative, and the WOD components of DPV2 would share the same corridor. Upon reaching the community of Whitewater (approximately 0.2 miles west of Marion Road), the alternative would turn southwest and cross Interstate 10. The alternative route would continue southwest along the D-V corridor, passing through undeveloped areas within the jurisdiction of the City of Palm Springs for approximately 1.4 miles.

National Monument and National Forest Lands. At the Highway 111 crossing, the corridor enters the Santa Rosa and San Jacinto Mountains National Monument. The route would traverse 1.3 miles (six towers) on the valley floor, then travel southwest up the San Jacinto Mountains and through the rugged terrain of the National Monument to exit the SBNF and Wilderness area at Tower DV-49.

Cabazon Area. After dropping down from the mountains and leaving National Forest/National Monument lands, the route would continue northwest for 0.9 miles, passing through the unincorporated residential area known as Cabazon Estates. The D-V Alternative would parallel Esperanza Avenue to the south and would proceed into the San Gorgonio River at the western end of Esperanza Avenue, traveling approximately 1.7 miles. Along Esperanza Avenue and just west of Tower DV-58 (in T3S R2E, Section 20), there would be two options (occurring in a short, 1,300-foot long segment):

- Option 1 would be to continue parallel to the existing D-V No. 1 transmission line, with the new D-V No. 2 tower installed approximately 130 feet south of the existing Tower DV-59.
- Option 2 would require that the existing D-V tower (Tower DV-59, located at the southern end of Orange Street) and the alternative tower would move approximately 500 feet to the north.⁴ In order to implement this option, SCE would likely have to purchase the properties north of the NW ¼ of NE ¼ of Section 20.

Areas South of Banning and Beaumont. Traveling west an additional two miles, the route would turn northwest and would pass between two parcels owned by the Morongo Indian Tribe. For approximately 1.1 miles, the alternative would traverse the City of Banning, north of and parallel to Porter Street within Smith Creek. Continuing west-southwest for another 0.7 miles through the City of Banning, the

⁴ When the D-V No. 1 line was constructed in 1986, this parcel was not owned by the Morongo Indian Tribe. According to SCE, the tribe acquired the parcel in an exchange handled by the BLM in the year 2000, based on Senate Bill S.1840 (Bureau of Indian Affairs Document PL 106-568) which transferred a 40-acre parcel of land (the NW ¼ of NE ¼ of Section 20) into trust held by the United States Department of Interior, Bureau of Indian Affairs. This original easement for the D-V No. 1 line through this parcel was granted by BLM. The BLM grant was for a 200-foot wide perpetual right-of-way for the construction, operation, and maintenance of the Devers-Valley No. 1 500 kV line. Under Option 1, SCE would be required to conduct negotiations with the Morongo Tribe to acquire additional rights for construction of the D-V Alternative through this parcel.

route would turn west and would traverse one mile of open space and scattered rural residential land, approximately 230 feet south of the parcel's northern boundary.

Potrero ACEC to Gilman Springs Road. The route would continue west for one mile adjacent to and traversing Smith Creek, at which point it would traverse the northern boundary of the Potrero ACEC. The D-V Alternative would be within the ACEC for approximately 1.7 miles.

The alternative would cross Highland Springs Avenue (which is the boundary between the Cities of Banning and Beaumont) going west and approximately 0.7 miles west-southwest of Highway 79, the route would turn west and may traverse the northwest corner of the Lamb Canyon Agricultural Preserve.⁵ Traveling west for approximately 2.6 miles, the route would cross Laborde Canyon and the adjacent open space areas.

Gilman Springs Road to Valley Substation. The D-V Alternative would exit Laborde Canyon as it would cross Gilman Springs Road, and would continue west for another 2.5 miles across agricultural land. Continuing west across the Ramona Expressway and Princess Ann Road, the route would travel outside of the northwest boundary of the City of San Jacinto and would cross the Colorado River Aqueduct.

The alternative would continue west across the Lakeview Mountains for approximately four miles, crossing Chastity Road, Mt. Rudolf Road, Puslar View Road, Contour Avenue, Juniper Flats Road, and Valley Road. Access roads already exist in this area. Approaching the unincorporated community of Romoland, the route would travel another 1.8 miles past scattered residences located adjacent to the ROW along Briggs Road, Malone Lane, Mountain Avenue, and Mapes Road. The alternative would cross Menifee Road and would turn south, traveling for approximately 0.8 miles until it would terminate at Valley Substation. The final 10 towers would be of "Tetra Tower" design to visually match the existing Devers-Valley No. 1 500 kV transmission line towers.

Construction activities would be similar to those of the proposed Devers-Harquahala 500 kV segment, as described in Section B.3.7 (Construction Activities) of the Project Description in this EIR/EIS and described in Section 4.3.1 of Appendix 1 of this EIR/EIS.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The D-V Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The D-V No. 2 Alternative would be constructed almost exclusively within an existing 330-foot transmission corridor where an existing 500 kV line has been constructed, and as such would be technically feasible. However, the D-V Alternative would require a Special Use authorization from the USDA Forest Service for the portion of the alternative located on National Forest System lands. In order to consider issuance of the authorization (easement) to allow construction of the transmission line, the Forest Service must comply with NEPA, the requirements of which would be met through the preparation of this EIR/EIS. After the completion of the Final EIR/EIS, the Forest Service would issue a Record of Decision (ROD) that documents the Forest Service decision on whether to approve authorizing a Special Use Easement as proposed, approve an alternative to the proposed action, or deny SCE's application and the rationale for that decision. If appropriate, the ROD would also address

⁵ The existing Devers-Valley No. 1 transmission line towers are not located within the Lamb Canyon Agricultural Preserve. However, the ROW easement crosses into the agricultural preserve.

whether Forest Plan amendments would be necessary before a Special Use Easement can be issued to SCE for this alternative.

However, amendments to the following plans may be necessary for approval of this new transmission line: San Bernardino National Forest Land Management Plan; Santa Rosa and San Jacinto Mountains National Monument Proposed Management Plan and Final EIS; and Memorandum of Understanding (MOU) between BLM, Forest Service, and the Pacific Crest Trail Association (PCTA). The USDA Forest Service would need to determine whether the D-V Alternative would be consistent with management direction in the governing Forest Plan. For example, conflicts with the defined scenic integrity objectives that apply to the D-V Alternative route would require a Forest Plan amendment. It is likely that installation of a fully aboveground facility such as the alternative transmission line and associated facilities would not be consistent with Forest Plan direction for desired landscape characters or scenic integrity objectives. If an amendment is required by the Forest Service, the Forest Service would determine the changes that would be necessary to the desired landscape character of the Santa Rosa and San Jacinto Mountains National Monument geographical unit of the San Bernardino National Forest, as established in the Forest Plan.

The requirements for plan amendments would not make this alternative infeasible. Overall, this alternative would be technically, legally and regulatorily feasible. However, it must be noted that construction could be delayed due to the requirement for extensive permitting and coordination with relevant federal land management agencies. Construction of the alternative, while challenging and requiring helicopter construction due to the steep terrain, would be technically feasible.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Land Use.** This alternative would cross substantially less land with adjacent residential land uses (avoiding the residential areas in Banning, Beaumont, Calimesa, and San Timoteo Canyon). In addition, no schools are located within 200 feet of the alternative ROW (there are 6 schools affected by the proposed WOD upgrades).
- **Cultural Resources.** The D-V No. 2 Alternative would avoid crossing the more highly developed area of the Morongo Reservation north of I-10, reducing impacts to tribal values and associated cultural resources.
- **Noise.** This alternative would affect few nearby residences and effects on all of the noise-sensitive receptors along the West of Devers corridor would be avoided under the D-V No. 2 Alternative.
- **Air Quality.** Due to the reduced amount of construction, and particularly the elimination of the demolition of existing structures that would occur with the West of Devers upgrades, the D-V No. 2 alternative would cause a significant reduction in the South Coast Air Basin (SCAB) emissions, and to a lesser extent the Salton Sea Air Basin (SSAB) emissions. This alternative would reduce emissions to the point where the South Coast Air Quality Management District (SCAQMD) regional volatile organic compounds (VOC) threshold is no longer exceeded. Additionally, this alternative, in place of the proposed West of Devers, would reduce the annual NO_x emission to below the General Conformity *de minimis* threshold.

C.4.4 Other Project Alternatives

C.4.4.1 Desert Southwest Transmission Project Alternative

Description

The Desert Southwest Transmission Line Project (DSWTP) Final EIS/EIR, published by the Imperial Irrigation District (IID) and BLM in October 2005, analyzes a proposed new 118-mile 500 kV line between Blythe and SCE's Devers Substation. The line would originate at a new 25-acre Keim Substation/Switching Station on the south side of Hobsonway east of the center of Blythe near the Blythe Energy Project (BEP) power plant. In addition, the DSWTP would include a new Midpoint Substation/Switching Station, located at the eastern intersection of the proposed line with the existing DPV1 line.⁶ The new line from the new Keim Substation/Switching Station to the new Midpoint Substation/Switching station would be constructed as a double-circuit line or two parallel lines.⁷ Also, in the future, a new substation could be built near Indio west of Dillon Road, adjacent to the existing transmission line facilities, to connect the proposed transmission line to IID's existing Coachella Substation.

The Final EIS/EIR for DSWTP has been completed so permitting could be completed earlier than equivalent DPV2 segment. Much of this alternative route would be in the same corridor as SCE's DPV1 transmission line, the proposed DPV2 line, and the proposed Blythe Energy Project Transmission Line Modifications (BEPTL). This alternative is illustrated in Figure Ap.1-11 of Appendix 1 of this EIR/EIS, as well as in Figure C-1. Because the proponents of the California DSWTP are proposing to construct a 500 kV transmission line from Blythe to Devers adjacent to the proposed DPV2 Devers-Harquahala 500 kV transmission line for the majority of the alignment, SCE is exploring a joint project proposal with DSWTP, where only one instead of two 500 kV transmission lines would be constructed since the parties would share a single 500 kV transmission line in the proposed DPV2 ROW. The joint project would include the construction of a 500 kV substation (see Substation Alternatives in Section C.5.2.7). Even if the projects were joined, the Harquahala-Midpoint 500 kV segment and the WOD upgrades would still be necessary as part of the DPV2 project.

The DSWTP transmission line would originate at the new Keim Substation/Switching Station and would traverse southwest along existing transmission line ROWs in western Blythe for approximately 1.8 miles. At this point it would turn west and proceed approximately 7 miles to the point where it would meet the corridor of SCE's existing 500 kV DPV1 and proposed DPV2 ROWs. A proposed new 25- to 50-acre Midpoint Substation/Switching Station would be developed at this location, which would provide a connection point for DSWTP, DPV1, DPV2, and the 230 kV BEPTL. The proposed line would be built as a double-circuit or two parallel 500 kV lines between Keim and Midpoint Substations.

From Midpoint, the line would parallel DPV1 until approximately 3 miles southeast of Desert Center. At this point, the line would shift to the north to minimize impacts to the Alligator Rock ACEC near I-10 (following the same alignment as the Alligator Rock–South of I-10 Frontage Alternative; see Section C.4.2.4.3). After passing the north end of Alligator Rock, the line would again shift back to the

⁶ A proposed new substation in the Blythe area is referred to as "Midpoint" by both DSWTP (see Section 4.4.1 above) and SCE in their respective applications; however, the actual locations of their respective Midpoint Substations differ, as is shown in Figure Ap.1-10 (DSWTP's Midpoint Substation would be approximately 5 miles northwest of SCE's proposed Midpoint Substation location).

⁷ Figure B-8 in the Project Description illustrates the design and dimensions of a double-circuit 500 kV line; two parallel lines would require a ROW of at least 300 feet.

south to return to its parallel alignment adjacent to the existing DPV1 transmission line and DPV2 ROW. If the projects were to be joined, then the DSWTP alignment would follow the proposed DPV2 route through Alligator Rock ACEC.

The proposed DSWTP transmission line would cross to the north side of I-10, approximately 2.5 miles east of the Cactus City rest area, and continue west adjacent to the existing DPV1 transmission line and DPV2 ROW to the termination point at Devers Substation.

Analysis of the DSWTP is presented in the Final EIS/EIR for that project. The impacts from construction of the 500 kV transmission line would be similar to those of the Proposed Project. For the purposes of this alternatives analysis, the DSWTP differs from the Proposed Project in the following respects:

- DSWTP includes the construction of three new substation/switching stations (Keim, Midpoint, and on Dillon Road) that would not be required with the DPV2 Proposed Project (although DPV2 includes an option to construct the Midpoint Substation).
- DSWTP requires construction of one double-circuit 500 kV line or two parallel 500 kV transmission lines for 8.8 miles from Keim Substation to Midpoint Substation.
- DSWTP would diverge from the DPV1 corridor to the north (closer to I-10) in the vicinity of Alligator Rock for approximately 9.5 miles.

Rationale for Full Analysis

Project Objectives, Purpose, and Need. The DSWTP Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The DSWTP Alternative is the subject of a separate EIR/EIS that has been certified by the Imperial Irrigation District. That document found the project not to have any legal, technical, or regulatory feasibility concerns.

Lessen Significant Environmental Impacts. This alternative has the potential to lessen environmental impacts as follows.

- **Biological Resources.** The habitat along the south side of I-10 near Alligator Rock is more disturbed than the habitat that lies farther south, because of mortality from automobiles and traffic and from flood control devices by Caltrans. Since DSWTP would diverge from the DPV2 corridor and would be closer to I-10, it would most likely be located in an area with less potential for desert tortoise impacts around Alligator Rock.
- **Cultural Resources.** This DSWTP alternative would avoid a central portion of Alligator Rock ACEC (7,726-acre area of archaeological significance) by diverging north from the proposed DPV2 corridor and closer to I-10 where it is more disturbed. The proposed route would be more sensitive, with two National Register Districts and several other potentially NRHP-eligible sites, whereas the DSWTP alternative would cross one National Register District and only a few other potentially NRHP-eligible sites in this area.

C.5 Alternatives Eliminated from Full EIR/EIS Evaluation

C.5.1 Introduction

As discussed in Section C.1, alternatives were assessed for their ability to reasonably achieve the project objectives and reduce the significant environmental impacts of the Proposed Project. Also, their technical, legal, and regulatory feasibility was evaluated. Based on these screening criteria, the alternatives eliminated from EIR/EIS consideration are listed above in Section C.3.2. The rationale for elimination of each alternative is summarized below and presented in detail in Section 4 of Appendix 1 of this EIR/EIS.

C.5.2 Transmission Line Route Alternatives: Devers-Harquahala

C.5.2.1 SCE North of Kofa NWR–South of I-10 Alternative

Description

This alternative route in Arizona was evaluated in the BLM's EIS (1978) for the DPV1 transmission line. The route was also selected for further evaluation for the 1985 DPV2 project by both SCE and BLM at the time of the previous studies in response to potential concerns regarding impacts to the Kofa NWR and protection of the desert bighorn sheep. SCE also included a similar alternative in the 2005 PEA as Subalternate 1 (North of Kofa NWR, South of I-10 Subalternate Route).

The North of Kofa NWR–South of I-10 Alternative would diverge from the proposed DPV2 route approximately 42.5 miles from its origin at Harquahala Switchyard. The route would head northwest approximately 1.5 miles before turning west-northwest towards I-10, and crossing north of Kofa NWR and the New Water Mountains. Approximately 16 miles from where the route diverged, it would parallel I-10 for 7 miles before turning west away from the interstate for another 4 miles. The route would jog to the northwest for 1.5 miles, then west where it would again parallel I-10 for 1 mile, then would jog back to the southwest. As defined by SCE, the route would head southwest for approximately 14.5 miles, crossing through La Posa Recreation Site and Long-Term Visitor Area, eventually rejoining the proposed DPV2 route 0.5 miles north of Yuma Proving Ground and 8 miles west of Kofa NWR.

The North of Kofa NWR–South of I-10 Alternative would be 3.4 miles longer than the proposed route and would cross 0.75 miles of private land, 3 miles of Arizona State land, and 78.7 miles of BLM land (SCE, 2005a, Table 3-3). This alternative is illustrated in Figure Ap.1-2 in Appendix 1 of this EIR/EIS, as well as in Figure C-2a.

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Kofa–South of I-10 Alternative would meet all of the stated objectives of the Proposed Project. However, it would likely take more time to complete permitting requirements, so it would not likely be completed by the end of 2009.

Feasibility. Because the alternative would be on BLM lands outside of an established BLM utility corridor, its approval would require BLM approval for creation of a new utility corridor. Because the Resource Management Plan does not specifically prohibit transmission lines in this area, a new ROW grant would be required, but a Plan amendment would not be necessary. This requirement would not make the alter-

native infeasible, but adds to the regulatory complexity of the alternative. This alternative would be technically, legally, and regulatorily feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Additional Length and Ground Disturbance.** This route would be approximately 3.4 miles longer than the proposed route, which will affect the length and intensity of short-term construction impacts and ground disturbance, increasing impacts in air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. In addition, the Proposed Project would be able to utilize existing access roads for access to new transmission towers (though new spur roads would be required). According to SCE, the North of Kofa NWR–South of I-10 Alternative; however, would require an additional 48.3 miles of access and spur roads which would result in permanent ground disturbance and corresponding loss of habitat.
- **New Transmission Corridor.** This alternative would establish a new transmission line corridor . In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors.
- **Biological Resources – Wildlife.** Although the alternative would avoid crossing the Kofa NWR, it could have greater adverse impacts than the Proposed Project as the route would create a new disturbed corridor through undisturbed BLM Category 2 Desert Tortoise habitat, which could increase impacts, and require more mitigation than building adjacent to an existing line. The Proposed Project in Kofa NWR, while on valuable desert tortoise habitat, does not have a comparative habitat designation since it would not be on BLM-administered land. In addition, there would be a greater potential to impact bighorn sheep with a new corridor along this alternative route.
- **Recreation.** The North of Kofa NWR–South of I-10 Alternative would cross through the heavily used La Posa Recreation Site and Long-Term Visitor Area and adjacent to the La Posa Designated Camping Area. Mineral and gem shows and swap meets during the winter draw tens of thousands of visitors to these recreation areas every year. Construction activities would disrupt recreation in these areas and a new utility corridor through these areas would reduce their recreational value.
- **Visual Resources.** As the transmission line would diverge from the existing DPV1 ROW, it would create new visual impacts with the creation of a new utility corridor. The route would reduce scenic views of the Plomosa Mountains and New Waters Mountains from I-10. Additionally, where the route would cross Highway 95 and the La Posa Plains, the alternative would impact views from residences and recreationists using the La Posa Recreation Site and Long-Term Visitor Area.

C.5.2.2 SCE North of Kofa NWR–North of I-10 Alternative

Description

This alternative was included in SCE’s 2005 PEA as Subalternate 4 (North of Kofa, North of I-10 Subalternate), which was considered and eliminated in SCE’s PEA. This alternative is similar to the North of Kofa NWR–South of I-10 Alternative (see Section C.5.2.1), except it would cross I-10 twice

and Arizona U.S. Highway 60 once to follow the Celeron/All American Pipeline corridor north of I-10. Approval of this alternative would require an amendment to the BLM's Lower Gila South RMP. This alternative is illustrated in Figure Ap.1-2 in Appendix 1 of this EIR/EIS, as well as in Figure C-2a.

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Kofa NWR–North of I-10 Alternative would meet all of the stated objectives of the Proposed Project. However, it would likely take more time to complete permitting requirements, so it would not likely be completed by the end of 2009.

Feasibility. Approval of this alternative would require an amendment to the Lower Gila South RMP. The Lower Gila South RMP prohibits overhead lines north of I-10 between townships 16W and 18W (BLM, 1985). This restriction on overhead lines establishes an 18-mile wide strip running north of I-10 to the northern boundary of the RMP, approximately 17 miles north of I-10. The Lower Gila South RMP prohibits overhead lines in this area due to sensitive lambing grounds for bighorn sheep and sensitive visual resources. The requirement for a plan amendment may not make the alternative infeasible, but it would add a series of regulatory requirements: (a) NEPA clearance of the plan amendment would be required; (b) public noticing would be required by filing in the Federal Register; (c) an extension of the Draft EIR/EIS public review period from 60 to 90 days; and (d) a 60-day Governor's Consistency Review following the publishing of the Final EIR/EIS. The Final EIR/EIS would also have to identify in its title that the EIR/EIS also evaluates a proposed Plan Amendment. It is not known at this time whether BLM would approve the required plan amendment; therefore, regulatory feasibility is not certain. While this alternative would be technically and legally feasible, its regulatory feasibility is in doubt.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Additional Length and Ground Disturbance.** This route would be approximately 5.1 miles longer than the proposed route, which would affect the length and intensity of short-term construction impacts and ground disturbance, including impacts in air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. Therefore the alternative would also have greater permanent ground disturbance and corresponding loss of habitat.
- **New Transmission Corridor.** This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs. As discussed above under Feasibility, plan amendments would be necessary in order for the BLM to grant approval of this alternative ROW due to its location through townships 16W to 18W north of I-10.
- **Biological Resources – Wildlife.** Although the alternative would avoid crossing the Kofa NWR, it would have a greater adverse impact to bighorn sheep than the Proposed Project. The alternative's

route between townships 16W and 18W would result in impacts to bighorn sheep lambing grounds identified in the BLM's Lower Gila South RMP, an area deemed unsuitable for overhead transmission lines. Additionally, the route would pass through BLM Category 2 Desert Tortoise habitat, which could increase impacts and mitigation for tortoises.

- **Recreation.** The North of Kofa NWR–North of I-10 Alternative would cross through the La Posa Designated Camping Area in two locations as well as crossing the La Posa Recreation Site and Long-Term Visitor Area. This alternative would cross 3.5 more miles of recreation area than the North of Kofa NWR–South of I-10 Alternative, with construction potentially disrupting recreation associated with the winter mineral and gem shows and swap meets and reducing the overall recreational value of these areas.
- **Visual Resources.** As the transmission line would diverge from the existing DPV1 ROW, the alternative would create new visual impacts with the creation of a new utility corridor and would impact views both to the north and south of I-10 in different areas, at the two I-10 crossings east and west of the Plomosa Mountains, and the crossing of Highway 60 southwest of Brenda. Similar to the North of Kofa NWR–South of I-10 Alternative, the route would reduce scenic views of the Plomosa Mountains and New Waters Mountains from I-10. Additionally, where the route would cross Highway 95 and the La Posa Plains, the alternative would impact views from residences and recreationists using the La Posa Recreation Site and Long-Term Visitor Area.

C.5.2.3 North of Kofa NWR Alternative

Description

In order to reduce the impacts of the SCE-identified subalternate routes and still avoid the Kofa NWR, the EIR/EIS team developed an alternative that would be shorter and further south than the SCE alternatives. This 37-mile alternative would diverge from the proposed route at the series capacitor just east of the Kofa NWR. It would replace a proposed route segment that is approximately 27 miles long. The alternative route would turn to the north and would parallel the boundary of Kofa NWR for 2.5 miles to its northeast corner. At that point the route would turn to the west and would continue to parallel Kofa NWR boundary for 4.5 miles to the eastern boundary of the New Water Mountains WA where the route would turn to the northwest for approximately 7.0 miles until the route is north of the New Water Mountains and approximately 1.8 miles south of I-10. The route would travel northwest and then south-southwest rejoining the Proposed Project approximately 1.25 miles west of the boundary of Kofa NWR and south of Quartzsite. This alternative is illustrated in Figure Ap.1-2 in Appendix 1 of this EIR/EIS, as well as in Figure C-2a.

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Kofa Alternative would meet all of the stated objectives of the Proposed Project. However, it would likely take more time to complete permitting requirements, so it would not likely be completed by the end of 2009.

Feasibility. While the route would be outside of the BLM utility corridor (within one mile of I-10), BLM states that no plan amendment would be required since construction of a transmission line is not prohibited by the Lower Gila South Resource Management Plan in this area. Thus, overall this alternative would be technically, legally, and regulatorily feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Additional Length and Ground Disturbance.** This route would be approximately 10 miles longer than the proposed route, which will affect the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. In addition, the Proposed Project would be able to utilize existing access for access to new transmission towers. The North of Kofa NWR Alternative, however, would require additional access and spur roads which would result in permanent ground disturbance and corresponding loss of habitat.
- **New Transmission Corridor.** This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs.
- **Biological Resources.** The EIR/EIS team completed a biological survey of the entire length of the North of Kofa Alternative on December 5-7, 2005. The following biological factors were considered and evaluated during the survey, including:
 - Suitable habitat or presence of nine federally listed species protected under the Endangered Species Act (i.e., threatened, endangered, or candidate for La Paz County)
 - Suitable habitat or presence of State listed wildlife species (i.e., Wildlife of Special Concern in Arizona [WSCA])
 - Plants protected under the Arizona Department of Agriculture's (ADA) Arizona Native Plant Law
 - Suitable habitat or presence of sensitive status species listed by the BLM that occur in the Yuma field office area
 - Birds protected under the Migratory Bird Treaty Act
 - ADA and BLM listed noxious weed species.

The results of the survey in regards to the above-mentioned biological regulations and concerns included the following resources:

- Suitable habitat for the Sonoran Desert tortoise (BLM sensitive and State WSCA) was identified along almost the entire route.
- Suitable habitat and suitable migratory habitat for the desert bighorn sheep was identified along the route within the Plomosa Mountains, and adjacent to the route north of the New Water Mountains and New Water Mountains Wilderness Area.
- Loggerhead shrikes, a BLM sensitive status bird, were observed near the southwest and southeast ends of the route.

- No special status bat species were observed; however, a few mineshafts were observed near the central portion of the route on BLM and private land.
- Several species of plants protected under the ADA Arizona Native Plant Law were observed along the route. Protection categories did not include any Highly Safeguarded plants.

Overall, this alternative would require disturbance of a 37-mile corridor that is relatively undisturbed at this time. A new access road would need to be constructed, following portions of existing unpaved or 4-wheel drive roads. In addition, disturbance would occur in areas with no existing access roads, such as mountain foothills. Bighorn sheep inhabit the mountainous areas of western Arizona and migrate through the foothills when moving from one area to another. When comparing this alternative route to the proposed route through the Kofa NWR, the same types of biological resources would be affected; however, the degree of effect would increase significantly when assessing impacts to the bighorn sheep due to the creation of a new corridor through undisturbed wilderness. The North of Kofa Alternative would pass through Game Management Unit (GMU) 44B South, which includes the Plomosa and New Water Mountains and has had a downward trend from 2002 to 2003. The alternative route would affect an area not currently crossed by a utility corridor, and would require disturbance of much more land than the proposed route.

- **Cultural Resources.** The following four archaeological sites were identified and recorded during the records search on December 12, 2005 and survey performed by the EIR/EIS team on December 13–19 2005, including:
 - A historical-period can scatter with a filled-in mine shaft, located where Plomosa Wash crosses the project area. Some modern debris is present along with a trailer and modern wells that appear to still at times be in use;
 - A historical-period site approximately 0.5 miles north of Site #1, where Scaddan Wash intersects the project area. It consists of three terrace rock features and a light can scatter; where top terrace feature meets desert pavement, there is a rock foundation of uncertain function approximately 4 feet on a side;
 - Two rock rings, likely Native American in origin, south of the pot break (discussed under Site #5 below); and
 - A group of five mine shafts that are likely modern, although a historical-period tobacco tin was present nearby; the shafts are located south of the historical-period site at Plomosa Wash (Site #1).

Two other possible sites were recorded, that could either be designated sites or isolated occurrences; in either case, recording has exhausted their research potential. These possible sites include:

- A prehistoric pot break consisting of approximately 100 sherds; and
- A chipping station, with approximately 25 artifacts (secondary and tertiary flakes) of green quartzite, all from same cobble, in an area approximately 5 meters in diameter.

These two possible sites are most likely isolated occurrences and as such they would not be considered significant and no further investigations are necessary. Approximately 20 other isolated occurrences were recorded, primarily cairns or mining test pits, as well as a few cans, flakes, and one core. As these do not qualify as sites, they cannot be considered significant and no further investigations are necessary.

- **Visual Resources.** As the transmission line would diverge from the existing DPV1 ROW, the alternative would have potentially significant visual impacts resulting from the creation of a new utility

corridor. The route would affect scenic views of the Plomosa Mountains and New Waters Mountains from I-10, as well as the potential future Dripping Springs ACEC.

C.5.2.4 SCE North of Blythe Alternative

Description

This alternative was included in SCE's 2005 PEA as Subalternate 2 (North of Blythe through Colorado Indian Reservation), which was considered and eliminated in PEA Section 3.1.2.1. The North of Blythe Alternative would cross agricultural land and would pass through a portion of the Colorado River Indian Tribe (CRIT) Reservation. It would be 3.3 miles longer than the proposed route. This alternative is illustrated in Figure Ap.1-3 in Appendix 1 of this EIR/EIS, as well as in Figures C-2a and C-2b.

Based on information provided on Subalternate 2 in SCE 1988 Amended PEA, the North of Blythe Alternative would depart the proposed DPV2 route approximately 1.5 miles west of Eagletail Mountains and 3 miles south of Salome Emergency Airfield. The route would then meet and parallel I-10 in a northwesterly direction below Bear Hills eventually crossing I-10 and then crossing Arizona U.S. 60 approximately 4 miles northwest of the I-10 crossing. The route would traverse the Plomosa Mountains and the Dome Rock Mountains before passing through the CRIT Reservation and heading towards the Colorado River. After crossing the river and traversing west to a point 4 miles north of Blythe Airport, the route would turn in a southwesterly direction for approximately 7 miles, where it would cross I-10 and rejoin the proposed route one mile south of I-10.

Potential Alternative Variation. Because this alternative, as designed by SCE and illustrated in Figure Ap.1-3 in Appendix 1 of this EIR/EIS, would rejoin the Proposed Project west of Blythe, use of the Midpoint Substation designated by SCE would not be possible. The North of Blythe Alternative could be used with either the Mesa Verde or Wiley Well Alternative Substation sites, but as noted in Section C.5.2.7 below these two alternatives (suggested by SCE) have been eliminated from consideration in this EIR/EIS due to their greater impacts than the Midpoint Substation. Therefore, in order to ensure that this alternative was feasible, a substation location would have to be identified.

As suggested by the City of Blythe during scoping, this alternative could also be designed to pass adjacent to the existing power plant (BEP I) and approved (but not constructed) power plant (BEP II), within the City of Blythe. With this route modification, the alternative would follow the 6.7-mile corridor mostly adjacent to an existing Imperial Irrigation District (IID) 161 kV transmission line from Buck Boulevard Substation to Midpoint Substation where it would join the existing DPV1 and proposed DPV2 corridor. The 6.7-mile route has also been proposed for the Blythe Energy Project 230 kV Transmission Line Modifications (CEC, 2006).

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Blythe Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The Lower Gila RMP restricts overhead power lines north of I-10 between townships 16W and 18W and establishes an approximately 18-mile wide strip running north of I-10 (essentially to the northern boundary of the RMP approximately 17 miles north of I-10) through which overhead power lines cannot be built. The requirement for a plan amendment may not make the alternative infeasible, but it would add a series of regulatory requirements: (a) NEPA clearance of the plan amendment would be required; (b) public noticing would be required by filing in the Federal Register; (c) an extension of

the Draft EIR/EIS public review period from 60 to 90 days; and (d) a 60-day Governor's Consistency Review following the publishing of the Final EIR/EIS. The Final EIR/EIS would also have to identify in its title that the EIR/EIS also evaluates a proposed Plan Amendment. It is not known at this time whether BLM would approve the required plan amendment; therefore, regulatory feasibility is not certain.

Overall this alternative would be technically feasible, but its legal feasibility would depend upon required approval of the CRIT. According to SCE, the CRIT Tribal Council denied SCE a right-of-way for the DPV1 line in 1977, indicating that it would adversely impact the tribe. At the time of SCE's 1988 amended PEA, SCE stated that the CRIT indicated that a right-of-way would not be approved for the proposed DPV2 project. Regulatory feasibility is in question due to the required amendment of the BLM Resource Management Plan.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Alternative Length and Ground Disturbance.** The North of Blythe Alternative would be 3.3 miles longer than the proposed route, which would increase the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. Overall, SCE states that 138 acres of permanent ground disturbance would occur with this alternative from where it would leave the DPV1 route to where it would rejoin the DPV1 ROW, compared to 11.7 acres for the equivalent portion of the proposed route (SCE, 2005a).
- **New Transmission Corridor.** This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs. An amendment to the RMP would be required in order for the BLM to grant approval of this alternative ROW (see discussion under Feasibility above). Finally, this new ROW may set precedent for future development of utilities in this corridor (future land use impacts).
- **Biological Resources.** This alternative would pass through Arizona Game and Fish Department (AGFD) Game Management Units 44B (includes Plomosa Mountains) and 43A (includes Dome Rock Mountains), found to be bighorn sheep habitat with good and increasing populations since the mid-1990s, which was last surveyed for population in 2003. This alternative would create potentially significant impacts to high-quality bighorn sheep habitat, including a major movement corridor between Ibex Peak/Haystack Peak and Lazarus Tanks mountain block and nearby lambing areas in the north Plomosa Mountains. Because the North Plomosa lambing area is active, this alternative poses greater impacts to bighorn sheep than the Proposed Project, even though the proposed route passes through the Kofa NWR (Henry, 2005).

This alternative would increase disturbance and removal of vegetation by 126 acres. This could significantly increase the chance that special status species would be affected by the increase in disturbed area. Also, this increase in disturbed area could increase the chance of noxious weed intro-

duction and also remove more native desert vegetation. The alternative would have greater impacts to vegetation in desert washes, especially between the McCoy and Big Maria Mountains and many smaller washes that braid through the bajadas adjacent to the mountains.

The North of Blythe Alternative has the potential for significant impacts on the desert tortoise. This route would be in BLM Category 2 and 3 Desert Tortoise habitats, as would the Proposed Project. This species likely occurs in the areas north of I-10, particularly near the base of the McCoy and Big Maria Mountains. The impacts to desert tortoise may be greater with this alternative than the Proposed Project because the route would traverse more native habitat than the Proposed Project. Without focused survey information, however, a definitive conclusion on the actual impacts to tortoises cannot be made.

Without focused surveys for burrowing owl, other special status plant and wildlife species, and listed plants, it is difficult to determine the impacts of this alternative on these species. This alternative appears to cross a larger acreage of native habitat than does the proposed route, however, so there may be a greater likelihood that there will be impacts to these species than with the Proposed Project.

- **Agricultural Resources.** This alternative would cross agricultural land on the CRIT Reservation and would create potentially significant impacts to Prime Farmland in Parker Valley. The North of Blythe Alternative would cross approximately 1.25 miles of agricultural land north of the City of Blythe, a portion of which is categorized as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). The North of Blythe Alternative would also run adjacent to and cross lands currently under Williamson Act contract. The route would run parallel to Williamson Act Prime contract lands in Section 33, Township 05 South, Range 23 East and would cross a small portion of a Williamson Act Prime contract in Section 19, Township 05 South, Range 24 East. Conversion of Farmland and Williamson Act contract lands due to the construction of transmission towers would be considered significant and potentially unmitigable impacts. This would be less, however, than the Proposed Project, which would cross 9.8 miles of agricultural lands, much of which would be categorized as Farmland and Williamson Act contract lands, and impacts to which would also be considered significant and potentially unmitigable. The North of Blythe Alternative would traverse only a quarter of the amount of Williamson Act contract lands compared to that crossed by the Proposed Project. While the types of impacts caused by the North of Blythe Alternative would be the same as those caused by the Proposed Project, the extent of impacts would be less than a quarter of the Proposed Project's impacts over the same portion of the route.
- **Visual Resources.** The presence of the new line could create significant impacts in a new corridor in the northern portion of the Plomosa and Dome Rock mountains, in the Colorado River riparian area, and through agricultural land in the Palo Verde Valley. Impact to scenic values for views from I-10 with strong contrasts south of Bear Hill and west of Blythe Airport; State Route (SR) 95 in the La Posa Plains; U.S. 60 west of Brenda, Poston Road, and Midland Road; and U.S. 95 north of Blythe. Significant impact to residential views near Brenda and along the Colorado River (2005 PEA references 1988 PEA, p. 10-78 – 10-84).

This alternative would create new significant visual impacts as the transmission line converges on, parallels, and then crosses to the north side of I-10 and then crosses U.S. 60 southwest of Brenda. It would also result in substantial visual impacts to residents on the west side of Brenda. This alternative would also cause visual impacts (a) to the La Posa Designated Camping Area at the Plomosa Campground (viewing south), (b) on views from Arizona 95 at the crossing, and (c) to back-country recreationists accessing the Boyer Gap area. Further west, the North of Blythe Alternative would also cause significant visual impacts at the crossings of the Colorado River and U.S. 95. Visual impacts may also occur on views from the Midland Long-Term Visitor Area north of Blythe. Significant vis-

ual impacts would occur as the North of Blythe Alternative route crosses the southern end of the McCoy Mountains and then I-10, approximately 4 miles west of Mesa Verde.

While the North of Blythe Alternative would avoid the visual impacts on Kofa NWR and the adverse visual impacts on the La Paz Arroyo–Copper Bottom Pass area, this alternative would result in significant visual impacts at the crossings of U.S. 95 and the Colorado River that would be greater than the Proposed Project given the lack of similar infrastructure features in the vicinity of the northern crossings.

- **Cultural Resources.** There would be greater impacts to cultural resources with this alternative, especially across the CRIT reservation. Consultation with tribal officials would be necessary and tribal approval of the route would be required.

The Proposed Project segment that would be replaced by this alternative includes 6 potentially NRHP-eligible archaeological sites: 2 prehistoric trails; 2 prehistoric temporary camps; 1 prehistoric cobble quarry with ceramic sherds; and 1 prehistoric and historic trail. The North of Blythe Alternative crosses substantially more cultural resources along its alignment. At McCoy Wash, the line proceeds east along the northern edge of Palo Verde Mesa, and parallels an existing transmission line along the southern flanks of the Big Maria Mountains where it crosses the Palo Verde Valley to the Colorado River and the Colorado River Indian Tribes (CRIT) Reservation. Beyond the political implications of crossing tribal lands, there would be very significant impacts to archaeological sites and sites of religious value to the CRIT. Most of the route parallels or coincides with previous corridor surveys, so that sites types and densities can be estimated fairly accurately. From the west to the east, until reaching the Big Maria Mountains, the route has low archaeological sensitivity (small discrete sherd or lithic scatters on sheet wash alluvial surfaces or between sand dunes). Towards the Colorado River and the Mule Mountains though, the corridor reaches the well-known Colorado River Geoglyphs. This is an area of extensive and complex ceremonial ground figures, trails, cleared circles, cairns, chipping stations, and habitation sites. Four of the geoglyph sites occur directly within this alternative, including a large spectacular and unique anthropomorphic geoglyph interpreted to be a dancing shaman holding a snake or lightning rod. This geoglyph and its associated chipping stations, cleared circles, sherd scatters, cairns, and other remains, along with many other geoglyphs along the river have been approved for NRHP as a Thematic District. Given the sacred nature of the sites along the northern alternative and the need to cross the CRIT Reservation, this alternative has much higher cultural resources sensitivity than the preferred route.

- **Socioeconomics and Public Utilities.** The North of Blythe Alternative route would be approximately 3.3 miles longer than the Proposed Project. The additional distance would require additional water for dust suppression activities, but this additional requirement would not create significant impacts. The North of Blythe Alternative would be located away from the El Paso Natural Gas Pipeline that traverses Kofa NWR, but would follow a portion of the Celeron/All American Pipeline. Although there is always potential for a collocation accident to disrupt utilities, it is unlikely that construction of either route would disrupt the adjacent pipeline.
- **Roadway Crossings.** The transportation impacts of this potential alternative would be greater than the proposed route segment because it would require 2 additional crossings of Interstate 10 (I-10), one additional crossing of Arizona State Highway 60 (SR-60), and one crossing of California State Highway 95 (SR-95).

C.5.2.5 SCE South of Blythe Alternative

Description

The South of Blythe Alternative would begin 2 miles south of the city of Blythe and would cross the Palo Verde Valley in California, about 10 miles south of the DPV1 route, crossing through a portion of Imperial County (see Figure Ap.1-4 in Appendix 1 of this EIR/EIS, as well as Figures C-2a and C-2b.). This alternative was included in SCE's 2005 PEA as Subalternate 3 (South of Palo Verde Valley through Imperial County Subalternate).

The alternative route would depart from the proposed DPV2 route 0.5 miles east of the Colorado River and would head southwest for approximately 14 miles. In this segment the route would parallel the Colorado River. One mile north of the Cibola National Wildlife Refuge, the route would turn west, cross the Colorado River into Imperial County, California (about 10 to 12 miles south of the existing DPV1 crossing), and would traverse farmland in the southern Palo Verde Valley. The route would continue west 1.5 miles from the Colorado River and would then turn in a northwesterly direction for approximately 15 miles towards the proposed route, crossing into Riverside County and then through the Mule Mountains. This alternative would rejoin the Proposed Project approximately 1.5 miles south of I-10 and 15 miles west of Blythe (note that this alternative would rejoin the DPV1 route west of the location of the Midpoint and Mesa Verde Substation sites [see Section C.5.2.7 below]).

The South of Blythe Alternative would be 11.5 miles longer than the proposed route. The alternative would cross 4 miles of farmland, which would be less than the 10 miles of farmland on the proposed route.

Rationale for Elimination

Project Objectives, Purpose, and Need. The South of Blythe Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. The South of Blythe Alternative would be technically and legally feasible. Amendments to applicable BLM management plans would not be required because the route would not go through a planning area that prohibits transmission lines, even though the South of Blythe Alternative route would be outside of an established BLM utility corridor. Applicable plans are the Lower Gila North Management Framework Plan and the Lower Gila South Resource Management Plan (Arizona) and in California the Northern and Eastern Colorado (NECO) and the California Desert Conservation Area (CDCA) Plans. Therefore, BLM has the authority to permit South of Blythe Alternative route with NEPA clearance, for which this EIR/EIS would be sufficient. Overall this alternative would be technically, legally, and regulatorily feasible.

Because of the location at which this alternative would rejoin the Proposed Project (approximately 1.5 miles south of I-10 and 15 miles west of Blythe), the South of Blythe Alternative could only be used with the Wiley Well Alternative Substation site. This alternative substation site has been eliminated from consideration as described in Section C.5.2.7.2 below. Therefore, identification of an appropriate substation for connection to the DSWTP would be required if this alternative were carried forward for analysis. Because the South of Blythe Alternative has been eliminated due to environmental reasons (see below), further investigation into an alternative substation site was not pursued.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Alternative Length and Ground Disturbance.** The South of Blythe Alternative would be 11.5 miles longer than proposed route, which would increase the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance. Increased disturbance and removal of vegetation could increase the chance of noxious weed introduction as well as the removal of more native desert vegetation. The route would also cross several sizeable desert washes in the area of the Mule Mountains between the agricultural areas south of the Palo Verde Valley and the western junction with the Proposed Project. In addition there are many smaller washes that braid through the bajadas adjacent to the mountains, which could be disrupted by construction.
- **New Transmission Corridor.** This alternative would establish a new transmission line corridor and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor. In general, consolidating transmission lines within common utility corridors, as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors. In addition, constructing the project within a corridor separate from a designated utility corridor (e.g., the DPV1 corridor) would create land use consistency issues because the route would be inconsistent with the BLM RMPs. Amendment would be needed in order for the BLM to grant approval of this alternative ROW (see discussion under Feasibility above).
- **Biological Resources.** Near the Colorado River crossing, this route would also be only 1.5 miles from the Cibola Wildlife Refuge where there is an abundance of waterfowl, proposed critical habitat for the southwestern willow flycatcher (SWWFL), and suitable habitat for the Yuma clapper rail (YCR). This route would parallel the Colorado River for approximately 16 miles, which could lead to more impacts to the abundant waterfowl or federally listed species (YCR and SWWFL). More bird collisions with the conductors at the river crossing would be likely to occur due to this route's proximity to the Colorado River (i.e., waterfowl habitat).

Although focused surveys have not been completed for this alternative, there would also be potentially greater desert tortoise impacts, because the alternative may traverse a greater amount of native habitats. The desert tortoise likely would occur in the native habitat areas (probably in low numbers) located west of the agricultural areas of Blythe to the western junction with the route of the Proposed Project. Without focused surveys for burrowing owl, other special status plant and wildlife species, and listed plants, it is difficult to determine what the impacts of this alternative will be on these species. But, this alternative appears to cross a larger acreage of native habitat than does the proposed route, so there may be more likelihood that there will be impacts to these species than with the Proposed Project.

- **Recreation.** The South of Blythe Alternative would be located south of the proposed route, and would create a new transmission line corridor across the southwestern edge of the Mule Mountains ACEC, which is a sensitive natural area that would be avoided by the Proposed Project. The route would also be parallel to the Colorado River along a great length of the river, where recreational use of the river is common (see discussion under Visual Resources, below).

In addition, hikers, ORV, and recreational users along the Bradshaw Trail (located in southeastern Riverside County and Imperial County near the Mule Mountains) would be potentially impacted by this alternative. The Bradshaw Trail, Riverside County's first road, was blazed by William Bradshaw in the gold rush of 1862 as an overland stage route beginning at San Bernardino and ending at

La Paz, Arizona (now Ehrenberg, Arizona). Today, the east-west trail is a 65-mile graded road that traverses mostly BLM land parallel to I-10 to the south and begins approximately 3 miles north of the community of North Shore near the Salton Sea State Recreation Area (near Dos Palmas, California). The eastern end of the trail is 2 miles southwest of the community of Ripley near the Colorado River. The trail crosses about 18 miles southwest of Blythe, California.

- **Visual Resources.** As the transmission line diverges south from the Proposed Project route at the Colorado River, this alternative would create new significant visual impacts. Views from the East Levee Road, which is parallel to the route and adjacent to the Colorado River, would be adversely affected, as would some views from the Colorado River (depending on tower placement). Adverse visual impacts would also occur at the BLM Oxbow Recreation Site and Imperial County Palo Verde Park (all near the Colorado River crossing). This alternative may also cause additional visual impacts on residences near the Colorado River crossing and on views from the Colorado River at the crossing.
- **Cultural Resources.** While the area in and around the South of Blythe Alternative has not been subjected to detailed archaeological surveys, the area's sensitivity for cultural resources can be projected from adjacent areas. The southern Palo Verde Valley agricultural lands have little potential for significant resources because of alluviation of sites and extensive agricultural disturbance. However, the alignment would cross about 12 miles of heavily dissected terraces parallel to the Colorado River floodplain. Surveys on the California side, in similar flat mesa settings, have revealed many sites ranging in age from 8,000 years to the late prehistoric period. Site types include cleared circles, rock rings and alignments, chipping stations, quarries, ceremonial geoglyphs, and trails with associated pot drops and artifact scatters. Similar types of sites, in high density, would be predicted for the Arizona side, including crossing through the Ripley Intaglio⁸ and two other major intaglio groups.

C.5.2.6 Paradise Valley Alternative

Description

GLC Enterprises, LLC (Glorious Land Company or "GLC") submitted a protest letter on May 13, 2005 and a scoping letter on November 14, 2005 regarding SCE's application to the CPUC to construct the Devers–Palo Verde No. 2 Project. The letters contend that if the new 500 kV transmission line is constructed as proposed that it would have significant impacts on GLC's proposal to develop 6,400 acres of property where they plan to develop a new mixed-use community. The proposed new community would be located in Shavers Valley, approximately 13 miles east of the City of Indio in unincorporated Riverside County. The project area is approximately bordered to the west by the Cactus City rest area, to the north by Joshua Tree National Park, and to the south by the Mecca Hills Wilderness Area. The eastern border of the plan area is approximately 5 miles west of Cottonwood Springs Road/Box Canyon Road (GLC, 2005). GLC has also requested a land exchange with BLM to make the project area more rectangular in shape (Sams, 2004) and to allow for water pipeline access.

The protest suggests that the transmission line should be constructed immediately to the south and west of the current proposed alignment and the proposed area of development to avoid impacting GLC's project (see Figure Ap.1-6 in Appendix 1 of this EIR/EIS, as well as Figure C-2b.). The scoping letter suggests that both the DSWTP and DPV2 be located in the same new power corridor. However, DSWTP

⁸ An intaglio is a large ground drawing created by removing the pebbles that make up desert pavement. These rock alignments, which are sacred to many Native Americans, are usually in the outline of animals or human-like figures and are mostly found on mesas along the Colorado River.

is entirely separate and independent of the Proposed Project; an EIR/EIS for that project has been completed so issues related to it are not addressed here.

Rationale for Elimination

Project Objectives, Purpose, and Need. The Paradise Valley Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. *SCE's Grant of Easement.* SCE has a Permanent and Exclusive ROW on the property (SCE, 2005c), which allows SCE to construct and enlarge its current use of the corridor. The existing DPV1 and DPV2 right of way corridor through the Chiriaco Summit (Paradise Valley Development) area consists of Fee, Grant of Easement (the easements were mostly negotiated; however, some rights were acquired thru condemnation), and nonexclusive right of way grant from BLM for the purpose of construction, operation, maintenance, and termination of 500 kV Electrical Transmission Lines, access roads, and appurtenances. The DPV1 and DPV2 ROW rights were obtained simultaneously under the same documents (for private property). However, some easement rights may need to be upgraded. Typically the easement rights obtained thru condemnation are restricted to only what was originally needed to install and operate the transmission line, along with specific access rights, usually nothing covering future installations of any kind (SCE Data Response #2, dated October 5, 2005). As a result of the land use and open space in the surrounding area and SCE's Grant of Easement, a reroute around or within the property would not be necessary.

Regulatory Feasibility – *BLM Land Exchange.* Constructing the Proposed Project within a corridor separate from the designated utility corridor (e.g., the DPV1 corridor) would create a land use inconsistency because the route would be inconsistent with the BLM RMP. A plan amendment would be needed in order for the BLM to grant approval of this alternative ROW.

GLC has approached BLM with a proposed land exchange in which BLM would acquire approximately 1,100 acres of public lands located within their project in exchange for four parcels of private lands east of the project. The selected public lands are within sections 4 and 12, Township 6 South, Range 10 East, which are adjacent to land held by the GLC.

BLM has informed GLC that these selected public land parcels are within the Chuckwalla Desert Wildlife Management Area, designated for recovery of the Federally threatened desert tortoise under the 2002 Northern and Eastern Colorado Desert Coordinated Management Plan (NECO), and are managed as critical desert tortoise habitat. In addition, these lands are within a utility corridor, designated by the California Desert Conservation Area Plan of 1980, as amended (1999). These utility corridors are managed for existing and future utility development. The BLM has determined that these two issues greatly decrease the probability of completing the proposed land exchange. Given these initial issues, the BLM has not developed a land exchange feasibility report on this proposal, the first step in a lengthy process to analyze a proposed land exchange.

Legal Feasibility. A map (referred to in the letter as Exhibit D and included in Appendix 1 of this EIR/EIS as Figure Ap.1-6) attached to the scoping letter suggested moving both the DPV1 and DPV2 500 kV lines along a southern alignment. This proposal is inconsistent with CEQA and applicable constitutional standards. The reasoning concerning the legal infeasibility of this option is as follows.

The objectives of the Proposed Project could be fully met without any change to the existing DPV1 500 kV line. None of the impacts of the Proposed Project results from the existence, location or operation of the existing 500 kV line, which is properly part of the environmental baseline. See CEQA Guidelines

Section 15125(a) (“the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published . . . will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.”). The impacts of the Proposed Project do not include the effects of activities already occurring or facilities already in existence, such as the DPV1 line. See *Riverwatch v. County of San Diego*, 76 Cal. App. 4th 1428, 1451-1453 (1999) (even prior illegal activities were part of the environmental baseline); *accord, Fat v. County of Sacramento*, 97 Cal. App. 4th 1270 (2002). Accordingly, moving the DPV1 500 kV line in a new alignment in conjunction with DPV2 under the Paradise Valley Alternative is not permissible under CEQA.

In explaining the “rule of reason” by which alternatives are selected for evaluation, CEQA Guidelines Section 15126.6(f) states, “The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.” The “project,” as defined by options that can meet project objectives, includes only the installation of a new 500 kV DPV2 line. The effects of the project are limited to the impacts associated with the installation of this 500 kV line. Appropriate alternatives must be limited to those that could avoid or lessen the effects of the 500 kV transmission line. CEQA does not permit the lead agency to try to “fix” or improve the existing environmental setting unrelated to the project — here the DPV1 500 kV line — using a proposed change to the environment as a hook.

As a related point, CEQA specifies that in order for a mitigation measure (and by inference, an alternative) to be feasible, it must meet relevant constitutional standards. See CEQA Guidelines Section 15124.4(a)(4). Such standards include a requirement that there be an essential connection or relationship between an alternative and a legitimate lead agency interest dealing with the Proposed Project (*Nollan v. California Coastal Commission*, 483 U.S. 825 (1987)), and that the alternative be “roughly proportional” in nature and scope to the impacts of the Proposed Project (*Dolan v. City of Tigard*, 512 U.S. 374 (1994)). Again, since the impacts of the Proposed Project stem solely from construction of a new DPV2 500 kV line, and not from the existing DPV1 500 kV line, relocation of the existing DPV1 500 kV line to a wholly new alignment or removal of the 500 kV line cannot reasonably be considered in the CEQA document.

Although requiring SCE to move the existing DPV1 line would not be allowable under CEQA, SCE could voluntarily propose a change in the placement of DPV1 along with the proposed DPV2 lines. However, in order to do this, SCE would need to obtain similar permits to that of the Proposed Project. This change has not been requested by SCE and so it is not considered and/or analyzed in this EIR/EIS.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Ground Disturbance in Undisturbed Open Space.** The Paradise Valley Alternative would create a new transmission corridor through undisturbed open space, which would increase the intensity of short-term construction impacts and ground disturbance due to the construction of new access and spur roads. This construction would create increased impacts in air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and to impact vegetation and wildlife is also increased with greater ground disturbance, especially through previously undisturbed areas.
- **New Transmission Corridor.** This alternative would establish a new transmission line corridor for DPV2 and would require considerable upgrading and construction of new roads, as opposed to the Proposed Project, which would use existing access for construction and maintenance along the DPV1/DPV2 corridor. In general, consolidating transmission lines within common utility corridors,

as proposed with DPV2, is desirable because it minimizes land disturbance, barriers to wildlife movement, and additional visual impacts that typically result from separate transmission line corridors.

- **Biological Resources.** The Paradise Valley project area is bounded on the south by the Congressionally designated Mecca Hills and Orocopia Mountains Wilderness Areas, and on the north by the Joshua Tree National Park. It contains high value desert tortoise habitat. Riparian vegetation was observed within the wash area and would be impacted by the creation of a new separate corridor through undisturbed open space. Thus, given its current natural landscape, the area is most likely host to a variety of plant and wildlife species that could be impacted by a new corridor as well.
- **Visual Resources.** Although the alternative route would be farther south of I-10, this alternative route would create a new, second corridor through a vast open space area, bordered by wilderness.
- **Hydrology.** The alternative would traverse a greater portion of a large wash that would extend from the northwestern portion of the plan area southeast towards Box Canyon Road and thus would be in an area subject to flooding.

C.5.2.7 Substation Alternatives

SCE's PEA states that the Midpoint Substation may be required as a component of the DPV2 project if the DSWTP is completed. This is considered as an optional project component that may or may not be constructed in conjunction with the rest of the project. The PEA includes the evaluation of two alternative sites for the substation that would be located south and west of Blythe, California.

The Midpoint Substation or an alternative would be constructed within a rectangular area approximately 1,000 feet by 1,900 feet, or 44 acres. With the Proposed Project, the terminating transmission tower or turning pole would be the tallest structure at the substation, ranging between 150 and 180 feet. The tallest component in the switchrack, the dead-end, would be approximately 133 feet. The substation would be constructed within a rectangular area approximately 1,000 feet by 1,900 feet (approximately 44 acres).

The switching facilities would be constructed within the substation property. The 500 kV switching station would include buses, circuit breakers, and disconnect switches. The switchyard would be equipped with 108-foot-high dead-end structures. Outdoor night lighting would be designed to illuminate the switchrack when manually switched on.

A new telecommunications facility would be installed onsite to provide microwave and fiber optic communications for protective relaying and SPS requirements. Three new microwave paths and two fiber optic systems would be installed at the Midpoint Substation. The proposed fiber optic systems are Midpoint–Buck Boulevard Substation and Midpoint–Devers–Harquahala.

A 45-foot by 70-foot mechanical-electrical room would be installed onsite to house all controls and protective equipment and a telecommunications room. A microwave tower would also be installed at the substation site.

Construction of the Midpoint Substation will require a temporary laydown area of approximately 5 acres. The laydown area would be located at or near the existing roadway at the preferred or either of the alternative sites.

C.5.2.7.1 Mesa Verde Substation Alternative

Description

This alternative site is located approximately 4.5 miles northwest of the Midpoint Substation site, also north of and adjacent to the DPV1 right-of-way on private land in the northwest quarter of Section 8, Township 3 North, Range 21 East, about 1.5 miles south of I-10. It is located northeast of the DPV1/DPV2 ROW at the point where the corridor turns from northwest-southeast to east-west. This substation alternative would require a 5-mile access road (as opposed to 3 miles with the proposed Midpoint Substation location). This alternative is illustrated in Figure Ap.1-7 in Appendix 1 of this EIR/EIS, as well as Figure C-2b.

Rationale for Elimination

Project Objectives, Purpose, and Need. The Mesa Verde Substation Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative is regulatorily, technically, and legally feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Alternative Length and Ground Disturbance.** This alternative would require 5.5 miles of access road construction to reach and construct the substation from Wiley Well Road, which will affect the length and intensity of short-term construction impacts and ground disturbance, affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination, water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance.
- **Biological Resources.** Similar to the Proposed Midpoint Substation site, the Mesa Verde Substation site would be located in habitat for Mojave fringe-toed lizard.
- **Land Use.** Use of the Mesa Verde Substation Site Alternative would also create new land use impacts in an open space area by precluding use of private land for other purposes. The Midpoint Substation would be on BLM land.
- **Visual Resources.** There would also be greater visibility from I-10 and the Mesa Verde area (approximately 1 mile south of I-10).

C.5.2.7.2 Wiley Well Substation Alternative

Description

This site is approximately 9 miles northwest of the proposed Midpoint Substation and 5 miles due west of the Mesa Verde site, also north of and adjacent to the DPV1 right-of-way, about 17 miles west of Blythe. The site would be constructed in Section 5, Township 3 North, Range 20 East, about 0.5 miles east of Wiley Well Road on BLM land within the BLM Designated Utility Corridor K. This alternative is illustrated in Figure Ap.1-7 in Appendix 1 of this EIR/EIS, as well as Figure C-2b.

The Wiley Well Substation Alternative would be accessed via Wiley Well Road, an existing paved two-lane roadway with an exit off of I-10. The substation would be located approximately 0.8 miles south of I-10, just east of Wiley Well Road and immediately adjacent to the north of the DPV corridor. This sub-

station alternative would require only a 100-foot access road (as opposed to 3 miles required for the proposed Midpoint Substation).

Rationale for Elimination

Project Objectives, Purpose, and Need. The Wiley Well Substation Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would be located on BLM land but would not require amendments to Resource Management Plans. This alternative is regulatorily, technically, and legally feasible.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Biological Resources.** This alternative substation site would be located in habitat of Mojave fringed-toed lizard (special status species) and within critical habitat for desert tortoise, whereas the proposed Midpoint Substation would not.
- **Recreation.** There would also be greater recreation impacts at the Wiley Well Alternative than at the Midpoint Substation because the site would be adjacent to Chuckwalla Valley Dune Thicket ACEC.
- **Visual Resources.** The closer proximity of this site to I-10 (approximately 0.8 miles south of I-10) and Wiley Well Road would create much greater visual impacts than those at the proposed Midpoint Substation site.

C.5.3 Transmission Line Route Alternatives: West of Devers

C.5.3.1 North of Existing Morongo Corridor Alternative

Description

This 8.9-mile alternative would diverge from the proposed route approximately 0.25 miles east of the eastern edge of the Morongo Indian Reservation. From there the route would head to the northwest for approximately 3 miles before heading west to parallel the proposed route for 4 miles, approximately 2 miles to the north of the existing corridor. The route would then turn to the southwest for 1.5 miles before rejoining the Proposed Project at the City of Banning. The Proposed Project would be approximately 7.5 miles long in this segment. If requirements resulting from the tribal negotiation would require implementation of this alternative, the four existing lines would also be removed from the existing corridor and rebuilt in this corridor. This alternative is illustrated in Figure Ap.1-10 in Appendix 1 of this EIR/EIS, as well as in Figure C-2b.

Rationale for Elimination

Project Objectives, Purpose, and Need. The North of Existing Morongo Corridor Alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. This alternative would proceed only if it were recommended and approved by the Morongo Band of Mission Indians and a new lease would need to be issued in order for it to move forward. The tribe indicated that this alternative was originally suggested because it would remove the existing 230 kV lines from the center portion of the tribal lands, making those lands available for other development

options. In addition, due to the rugged terrain of the San Bernardino Mountains, there could be technical feasibility issues with siting all four circuits in a corridor to the north.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Ground Disturbance and Removal Activities.** Removing and reconstructing four transmission circuits would result in greater impacts and longer construction time than required for the Proposed Project's WOD components. This alternative would require removal and disposal of the existing towers, hardware, and conductors, and this additional construction and excavation could result in increased ground disturbance and impacts affecting air quality, noise, transportation and traffic, hazardous materials related to environmental contamination (especially in the more developed area closer to I-10), water use for dust suppression, and geologic resources related to soil erosion. The potential to disturb unknown cultural resources and impact vegetation and wildlife is also increased with greater ground disturbance.
- **Biological Resources.** While surveys of this route have not been completed, the habitat farther from I-10 and closer to the San Bernardino Mountains (just south of San Bernardino National Forest) is expected to be of higher quality due to its more undisturbed nature. Therefore, the potential to impact sensitive vegetation and habitat would be much greater under this alternative.
- **Cultural Resources.** In a report by Mooney/Hayes Associates (prepared for SCE), entitled *Cultural Resources Inventory of the Proposed Vista to Devers Transmission Line, Riverside and San Bernardino Counties* (February 2005), it is stated on page iv: "Some consideration has been given to the possibility of relocating a portion of the transmission line to higher elevations where the corridor crosses the Morongo Indian Reservation. This alternative route is conceptual only and while it was subject to limited levels of field reconnaissance, no effort has been made to include this acreage in the APE for the current cultural resource inventory." Although no survey data is presently available, by placing the line in the less disturbed areas farther north on the Morongo Reservation, there would most likely be a greater chance of encountering cultural resources due to the topographic relief and number of stream crossings. The new lines would also cut across entrance to canyons, which may hold a special importance to the tribe. On the other hand, the existing corridor is in an alluvial setting and the only potentially NRHP-eligible site is a historic water conduit that could be easily avoided.

C.5.3.2 Composite Conductor Alternative

Description

This alternative is presented in response to a comment letter filed in the CPUC's General Proceeding (A.05-04-015) prior to the EIR/EIS public scoping period (filed: May 16, 2005 by 3M Composite Conductor Program) and would include the replacement of existing conductors in the West of Devers 230 kV system with Aluminum Conductor Composite Reinforced (ACCR) or Aluminum Conductor Composite Core (ACCC) wires. Composite conductors have recently been developed and are being tested to provide roughly two to three times the transmission capability (ampacity) of the standard proposed Aluminum Conductor Steel Reinforced (ACSR) conductors, at somewhat higher but undisclosed costs. See Section 4.3.3 in Appendix 1 of this EIR/EIS for further details.

Rationale for Elimination

Project Objectives, Purpose, and Need. This alternative would utilize the existing single-circuit 230 kV towers for the conductor conversion. This poses a risk to SCE achieving its system capacity goals

for West of Devers because of the age of the existing structures and their outmoded design. Since re-conductoring would make use of the existing structures, there would be uncertainty regarding the expected life of the newly reconducted corridor, in particular along portions on aged wood structures. The proposed steel tower double-circuit arrangement would provide a new system that would have a normal life expectancy. The proposed West of Devers upgrades would also provide a uniform capacity to each circuit in the corridor, which provides system stability in the case of an outage of one of the circuits. This would not be achieved under this alternative because of the different types of structures and the variety of conductor sizes across the corridor. An outage would therefore be more likely to overload the remaining circuits. Additionally, tower replacement would likely be necessary in some areas, and costs of this alternative would be notably higher than the proposed West of Devers upgrades, which would diminish the likelihood of achieving the economic objectives of the Proposed Project. Use of the outmoded existing structures under this alternative would leave the West of Devers corridor incapable of meeting the basic project objective of adding 1,200 MW of transmission import capability.

Feasibility. Reconductoring the existing WOD 230 kV system with composite conductors appears to be legally, technically, and regulatorily feasible. However, by depending on existing older towers for the conversion, SCE's system capacity goals for West of Devers may not be achieved, which would fail to satisfy the objectives of the Proposed Project.

Potential Environmental Impacts. Because reconductoring the existing towers would not remove the existing single-circuit wood H-frame and lattice steel structures in the Devers–San Bernardino Junction segment, the existing towers would remain. The visual benefit of reducing the number of tower lines in the corridor would not be achieved. Also, these structures are aged and could require slightly more frequent maintenance than the new towers that would be installed under the Proposed Project.

C.5.4 Other Project Alternatives

C.5.4.1 Convert DPV1 from AC to HVDC Transmission Line

Description

This alternative was included in SCE's 2005 PEA (Section 2.2.4.2) and is discussed in further detail in Section 4.4.2 in Appendix 1 of this EIR/EIS. This alternative would modify the existing DPV1 500 kV transmission line to convert DPV1 from an AC line to a high-voltage direct-current (HVDC) line. Based on the preliminary power flow and stability studies, the project scope of the HVDC Alternative was identified as follows:

- Palo Verde Substation: Install a converter and associated filters for 3,000 MW
- Devers Substation: Install a converter and associated filters for 3,000 MW HVDC operation
- Build a new Devers-Valley #2 500 kV transmission line
- Build a new Valley-Serrano # 2 500 kV transmission line
- Drop load at eight SCE A bank stations
- Drop generation in Arizona for the loss of HVDC line

Rationale for Elimination

Project Objectives, Purpose, and Need. Converting DPV1 from AC to HVDC would increase California's transmission import capability from the Southwest and would enhance and support the competitive energy market in the Southwest. The conversion to HVDC would add sufficient transmission import capability to satisfy Proposed Project objectives, but the cost of this alternative would exceed the cost of the

Proposed Project. Estimated costs for the HVDC line include: \$450M for the two 500 kV HVDC converter stations with ~3,000 MW capacity (\$225M at each end); other Devers-Harquahala upgrades (minor); cost of the proposed WOD 230 kV upgrades; and a delay in the project schedule to restart planning.

Increased costs associated with construction of the converter stations and other upgrades would need to be passed on from the transmission owner to the customers of transmission service. This would diminish the economic performance of the line and reduce the likelihood of achieving the economic objectives of the Proposed Project.

Combining the capacity of DPV1 and DPV2 into a single HVDC line, as would occur under this alternative, would decrease the reliability and flexibility of the transmission network. The HVDC line would operate in a manner similar to a new point load at the Palo Verde hub and a new source of power at Devers, and it would place the entire transmission capability of the Devers–Palo Verde corridor onto the single set of existing towers, which would increase the likelihood of large power outages. To address this, operation of the HVDC line would require the grid operator (CAISO) to establish special protection systems (SPS) or remedial action schemes (RAS) such as load shedding in the case of a line outage. Developing SPS and RAS requires planning-level coordination through WECC. The WECC planning process is in its third phase for the Proposed Project, and commencing the planning process for this alternative would delay the ultimate in-service date to beyond 2009. Further, imposing SPS and RAS measures would conflict with the Proposed Project objective of providing increased reliability, insurance value against extreme events, and flexibility in operating the grid. Because an outage of this HVDC line would force SCE to drop load at a number of substations and there would be reduced likelihood of achieving the economic objectives, this alternative would not meet all of the stated objectives of the Proposed Project. Therefore, converting DPV1 from AC to HVDC would increase California's transmission import capability from the Southwest and would enhance and support the competitive energy market in the Southwest, but it would not meet the objectives of providing increased reliability, insurance value against extreme events, and flexibility in operating the grid.

Feasibility. This alternative, as it was defined in SCE's 2005 PEA (Section 2.2.4.2), with the Devers-Valley-Serrano No. 2 500 kV, was eliminated from further study by SCE due to its higher cost when compared to DPV2. Technical feasibility was not examined by SCE in detail because of the economic cost of the alternative. Although the alternative appears to be technically feasible, it would place the entire transmission capability of the Devers–Palo Verde corridor onto the single set of existing towers, which would increase the likelihood of large power outages. As noted above, the alternative warrants dropping load at certain 230/66 kV substations in the event of a double-line outage of DPV1 and DPV2. This limits flexibility in operating the grid.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Land Use and Visual Resources.** Converter stations at Harquahala and Devers would require additional land disturbance beyond that of the Proposed Project. Construction of the converter stations would require permanent disruption of large new land areas, approximately 20 to 40 acres each, near Devers and the eastern termination point. The structure housing each converter station would be approximately 70 to 100 feet tall, and the footprint of the building would be approximately 400 to 600 feet on each side. This would introduce a new industrial land use to the two endpoints.
- **Additional Transmission Lines.** There would be less flexibility for interconnections with other existing or proposed AC transmission lines in the CAISO system, which could lead to construction of additional AC facilities parallel to the HVDC line. Converting DPV1 to HVDC would eliminate

the availability of an optional interconnection at the Midpoint Substation in the Blythe area, or at any other location along the Devers–Palo Verde corridor, because the HVDC circuit would not be compatible with the surrounding AC system. The limited access nature of the HVDC circuit means that construction of the BEPTL or DSWTP, which might be avoided with an interconnection to DPV2, would become more likely.

- As this alternative is defined in the PEA, it would create additional environmental impacts due to construction of a second Devers-Valley-Serrano 500 kV line; however, this aspect of the alternative may be avoidable with a HVDC line rating of 2,918 MW.

C.5.4.2 Underground Alternative

Description

In order to construct an underground 500 kV transmission line, insulated power cables would be placed underground along specific high-impact segments or the entire transmission line alignment from Harquahala Substation to Devers Substation. There are four underground technologies for 500 kV that are commercially available: High-Pressure Fluid (HPFF) Cables; Self-Contained Fluid-Filled (SCFF); Solid Dielectric (XLPE) Transmission Cables; and Compressed Gas Insulated Transmission Lines (CGTL).

The choice of insulation, and essentially cable system type, is essentially a compromise as with few exceptions no proven insulation material/cable type is superior to all others in a cost-effective way for every application.

Regardless of the underground technology used, a transition structure would be required at the ends of the underground segment, as well as two transition structures at each substation, to support the underground cable terminations and to connect the underground cable to the overhead bus within the substations. This transition structure would take the place of the substation dead-end structure required for overhead line terminations. It is anticipated that the transition structure would be shorter than the typical overhead line “dead end” structure and would be approximately 80 feet high and with a footprint of approximately 2 to 3 acres. For the HPFF cable option, additional space would be required at the substation for the fluid pressurization equipment.

Undergrounding a 230 kV line for the West of Devers segment would be feasible and has been completed by SCE and Pacific Gas and Electric (PG&E); however, each circuit would require a 3-foot continuous trench creating much greater construction and habitat disturbance impacts than with the overhead Proposed Project.

Rationale for Elimination

Project Objectives, Purpose, and Need. The Underground Alternative would increase California’s transmission import capability from the Southwest and would enhance and support the competitive energy market in the Southwest. In addition, in order to be comparable to the Proposed Project, underground construction options must meet the requirement for operation at 500 kV. Therefore, this alternative would meet all of the stated objectives of the Proposed Project.

Feasibility. All of the technologies would be legally and regulatorily feasible. Three of the four technologies would be technically feasible for the Underground Alternative (SCFF, HPFF, and XLPE) in specific circumstances and lengths. For distances less than approximately 1,000 feet, CGTL technology would be feasible as well. However, none of the technologies have been implemented at 500 kV in the United

States close to the length of even a portion of the Proposed Project and there has only been limited implementation in other countries. Therefore, as discussed in more detail in Section 4.4.3 of Appendix 1 of this EIR/EIS, the reliability of underground 500 kV technologies for use in the Underground Alternative has not been fully demonstrated.

Additionally, there are serious reliability concerns associated with slope construction and underground crossings of active fault zones, which question the feasibility of the Underground Alternative. Finally, the cost of undergrounding along the part of or the entire proposed route would be cost prohibitive.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts.

- **Ground Disturbance.** Construction of the Underground Alternative (as either 230 kV or 500 kV) would require substantially more construction activity and ground disturbance due to the continuous trenching required. Overhead transmission line construction would result in construction disturbance primarily at individual structure sites, located approximately every 1,100 feet (assumes 784 towers over 230 miles) along the alignment. Underground construction and trenching would involve much greater ground disturbance and construction-related impacts (traffic, air quality and dust, and noise). There is also a greater potential to encounter contaminated soils and cultural resources, and to impact biological resources due to the greater ground disturbance.

Installation of an underground transmission line requires grading and clearing of trees and vegetation along the entire length of the corridor prior to trenching (i.e., similar to pipeline construction) rather than only at tower sites. Such construction is much more difficult and results in much more land disturbance than overhead lines especially in hilly, rugged terrain where overhead lines can typically span between ridge tops (e.g., in the area around Alligator Rock) or in sensitive biological areas, such as San Timoteo Canyon west of Devers Substation.

- **Access Roads and Transition Stations.** Whenever possible, existing roads along the DPV1 corridor would be utilized to minimize new access road construction. Access roads must be created or improved to handle large construction vehicles and trucks hauling reels of cable. Scarring along the alignment would result from the installation of all-weather access roads, splice vaults, and potential aboveground cooling equipment resulting in substantial visual impacts. Construction of the transition stations would each require a footprint of 1 to 1.25 acres, resulting in temporary and permanent biological, cultural, and visual resources impacts as well.
- **Construction and Repair Time.** The installation of an underground transmission line would require more time than construction of an equivalent length of overhead line because of the time required for excavating trenches, constructing the duct banks, fluid reservoirs, and/or stop joints. Construction could be substantially extended due to restrictions on the times of the year available for construction, required to limit the impacts on the environment. In addition, maintenance and restoration time in the event of an outage would also be more difficult and could result in longer outages and repair times. Although electric fields are reduced with increasing burial depth, magnetic fields above underground conductors are generally higher than from overhead lines due to closer proximity to the conductors to the ground.

C.5.5 Non-Transmission Alternatives

C.5.5.1 New Conventional Generation

Description

For the New Conventional Generation Alternative, it is assumed that the most likely method of providing new power generation would be through the construction of combined cycle natural gas-fired turbine power plants. This, however, does not preclude the potential use of alternative energy technologies such as renewable resources, which are discussed in a separate section below. The specific configuration of new generation would vary depending on a number of uncontrollable factors (e.g., need, market forces), but the new facilities would likely be installed in a location with convenient and economical access to fuel supplies, existing transmission facilities, major existing substations, and load centers. Construction and operation of new generation facilities would be subject to separate permitting processes that would need to be completed in advance of construction. Possible locations for new power generation facilities are illustrated on Figure Ap.1-12 in Appendix 1 of this EIR/EIS. For the purposes of this analysis, new generation facilities are assumed to be the following:

- **Near the Devers Substation.** A new power plant could be developed similar to the 456 MW Ocotillo Energy Project, which was proposed by InterGen in May 2001 but never approved for construction, or an expanded generation facility could be installed at the 135 MW Indigo Energy Facility operated by Wildflower LLP near to the Devers Substation.
- **Near the Etiwanda Substation.** Etiwanda is northwest of the Vista Substation. New facilities could be installed at or near the 770 MW Etiwanda Generating Station (currently owned by Reliant Energy) or that facility could be repowered to create a state-of-the-art facility.
- **Near the Valley Substation.** New or expanded generation could occur at the Inland Empire Energy Center, now under construction. The Inland Empire Energy Center was originally proposed by Calpine Corporation in August 2001 and approved for 810 MW in June 2005.

Rationale for Elimination

Project Objectives, Purpose, and Need. The New Conventional Generation Alternative would enhance competition among generating companies supplying energy to California and the power supply within California would be increased. However, new conventional generation would not increase California's transmission import capability from the Southwest, and it would not provide additional transmission infrastructure for energy suppliers selling energy into California energy markets. Therefore, this alternative would not meet all of the stated objectives of the Proposed Project.

Building new generation would not provide the transmission upgrades of the Proposed Project, and as such, building new generation, either conventional or renewable, would not be comparable to an economic transmission line such as Proposed Project. Economic transmission lines provide access to many generators and facilitate a robust transmission system. SCE anticipates that DPV2 would not only allow for interconnection of new generation resources to the transmission grid but also provide for flexible delivery alternatives and increase access to a greater number of power generators. DPV2 also would provide load-serving entities, such as SCE, to procure short-, medium-, and long-term contracts with existing generation. Such flexibility in contracting would probably not be realized under the New Conventional Generation Alternative because new generating plants in southern California would likely require long-term contracts to meet financing requirements to be built and would likely have their full output secured through the contracts. Under this alternative, these generating plants would not be as likely to partici-

pate in short-term energy markets and produce the enhanced competition that SCE expects to facilitate with DPV2.

The economics of building new generation outside of California, and especially in the Palo Verde area, have historically been lower relative to new generation in southern California due to the following factors:

- Lower cost of delivered natural gas
- Lower labor rates
- Lower cost for bulk materials purchased locally (including State taxes)
- Lower costs for emissions offsets/credits
- Lower land costs.

These trends will likely continue into the future providing a continued economic incentive for developers of new generation outside of California.

Feasibility. Developing new conventional generation in southern California is feasible from a technical standpoint. This has been demonstrated by merchant power plant developers and other public utilities in the region that have successfully developed power plants recently to achieve economic gains.

Investor-owned utilities such as SCE have not recently pursued development of new conventional power plant facilities because of the capital requirements and the financial risk involved. SCE believes it is not in a position to make long-term financial commitments in generation due to uncertainty surrounding the SCE customer base, which could be diminished by direct access and municipalization trends, and the creditworthiness and financial condition of SCE, which were severely damaged in 2000 and 2001 (SCE, 2005a, PEA Appendix G-2, Section III(A)(2)). In addition, SCE could not develop a power plant without first getting CPUC approval on ratemaking, which would create project uncertainty. As such, this alternative is considered to be feasible, but not economically viable with SCE as a developer.⁹

The development of gas-fired power plants in southern California requires compliance with strict air quality regulations, governed by the South Coast AQMD. Mitigation requirements are extensive, requiring purchase of emission offsets and other requirements. However, these requirements have been met by several power plants, so compliance is considered to be feasible.

Potential Environmental Impacts. Major power plants require permanent loss of 20 or 30 acres of land, construction of varying length of transmission lines to connect with existing facilities, and construction of pipeline connections for natural gas and water. Construction impacts are generally contained near the plant itself, but operational impacts can be more regional. Air emissions from burning of fossil fuels to generate power occur during the life of the plant, and the plant facilities can be visible from large distances. Depending on technologies used, power plants can consume large amounts of water.

C.5.5.2 Renewable Generation Resources

Description

The principal renewable electricity generation technologies that could serve as alternatives to the Proposed Project and do not burn fossil fuels are geothermal, solar, hydroelectric, wind, and biomass.

⁹ There is a power facility currently proposed and under consideration by the California Energy Commission near the Valley Substation: the Sun Valley Power Project. This plant was proposed by a subsidiary of Edison International: Edison Mission Energy. Edison International is a parent company of both SCE and EME.

Geothermal. Geothermal technologies use steam or high-temperature water (HTW) obtained from naturally occurring geothermal reservoirs to drive steam turbine/generators. Geothermal plants must be built at a geothermal reservoir site and typically require about 0.5 acres/MW (600 acres for 1,200 MW). The technology relies on either a vapor dominated resource (dry, super-heated steam) or a liquid-dominated resource to extract energy from the HTW. Geothermal is a commercially available technology, but it is limited to areas where geologic conditions result in high subsurface temperatures. There are no geothermal resources in the project vicinity, making this technology an infeasible alternative without substantial transmission infrastructure.

Biomass. Biomass generation uses a waste vegetation fuel source such as wood chips (the preferred source) or agricultural waste. The fuel is burned to generate steam. Biomass facilities generate substantially greater quantities of air pollutant emissions than natural gas burning facilities, though these emissions may be partially offset by the reduction in emissions from open-field burning of these fields. In addition, biomass plants are typically sized to generate less than 20 MW, which is substantially less than the capacity of the 1,200 MW.

Solar. Currently, there are two types of solar generation available: solar thermal power and photovoltaic (PV) power generation.

- Solar thermal power generation uses high temperature solar collectors to convert the sun's radiation into heat energy, which is then used to run steam power systems. Solar thermal is suitable for distributed or centralized generation, but requires far more land than conventional natural gas power plants. Solar parabolic trough systems, for instance, use approximately five acres to generate one megawatt.
- Photovoltaic (PV) power generation uses special semiconductor panels to directly convert sunlight into electricity. Arrays built from the panels can be mounted on the ground or on buildings, where they can also serve as roofing material. Unless PV systems are constructed as integral parts of buildings, the most efficient PV systems require about four acres of ground area per megawatt of generation.

Solar resources would require large land areas in order to meet the project objective to supply 1,200 MW of electricity. While solar generation facilities do not generate problematic air emissions and have relatively low water requirements, there are other potential impacts associated with their use. Construction of solar thermal plants can lead to habitat destruction and visual impacts. PV systems can also have negative visual impacts, especially if ground-mounted. Furthermore, PV installations are highly capital intensive and manufacturing of the panels generates some hazardous wastes.

Both solar thermal and PV facilities generate power during peak usage periods since they collect the sun's radiation during daylight hours. However, even though the use of solar technology may be appropriate for some peaker plants, solar energy technologies cannot provide full-time availability due to the natural intermittent availability of solar resources.

Wind. Wind carries kinetic energy that can be utilized to spin the blades of a wind turbine rotor and an electrical generator, which then feeds alternating current (AC) into the utility grid. Most state-of-the-art wind turbines operating today convert 35 to 40 percent of the wind's kinetic energy into electricity. A single 1.5 MW turbine operating at a 40 percent capacity factor generates 2,100 MWh annually. Modern wind turbines represent viable alternatives to large bulk power fossil power plants as well as small-scale distributed systems. Wind turbines being manufactured now have power ratings ranging from 250 watts to 1.8 MW, and units larger than 4 MW in capacity are now under development (AWEA, 2004). The

average capacity of wind turbines today is 750 kW. The San Geronio Pass and Tehachapi area are two likely sources of wind energy within SCE's territory.

In open, flat terrain, a utility-scale wind plant would require about 60 acres per MW of installed capacity. However, only 5 percent (3 acres) or less of this area would actually be occupied by turbines, access roads, and other equipment. The remainder could be used for other compatible uses such as farming or ranching. A wind plant located on a ridgeline in hilly terrain will require much less space, as little as two acres per MW (AWEA, 2004).

Hydroelectric Power. In order to locate a hydropower project with peaking capability of 100 MW, a significant area of land is required, typically on the order of 1,400 acres, with construction of a storage reservoir constituting the primary land use. While hydropower does not require burning fossil fuels and may be available (e.g., on the Colorado River or a local water resource), this power source can cause significant environmental impacts primarily due to the inundation of many acres of potentially valuable habitat and the interference with fish movements during their life cycles. As a result of these impacts, it is extremely unlikely that new hydropower facilities could be developed and permitted in California within the next several years.

Rationale for Elimination

Project Objectives, Purpose, and Need. Renewable resources, in particular, tend to rely on dedicated, long-term, full-requirement contracts. SCE has stated that it is not aware of any renewable generation projects in southern California in which only a portion of its full capacity is secured by contract, and the remaining capacity is sold on a merchant basis. Therefore, use of renewable resources would be inconsistent with the objectives of the Proposed Project, which are focused on creating the ability for DPV2 to increase California's transmission import capability from the Southwest and enhance and support the competitive energy market in the Southwest.

SCE stated in the PEA that it specifically considered the solar and wind renewable generation as alternatives to this project. Generation from either technology is categorically "as available" and therefore does not provide the dispatch flexibility that resources delivered via DPV2 can potentially provide. Nevertheless, SCE's evaluation of DPV2 assumes full compliance with California's Renewable Portfolio Standard, in which SCE plans to meet the statutory requirement that 20 percent of its retail energy load be met by renewable generation and a significant portion of this goal is expected to be met through wind and solar generation. Moreover, SCE's future procurement activities will consider additional cost-effective renewable resources that go beyond the 20 percent statutory requirement.

Feasibility. As described below, each of the renewable technologies below would not be able to produce 1,200 MW as is required for the DPV2 Project. If several different technologies were combined together, such as development of wind technology in the Tehachapi area, the Stirling Solar Dish and/or the Imperial Valley geothermal reserves, it would be possible to generate more than 1,200 MW of power. However, the permitting and construction of the various projects within the project timeline would be unlikely and each of the projects would still require the construction of transmission lines to bring the power into the Los Angeles area.

Potential Environmental Impacts. This alternative has the potential to cause the following environmental impacts. Renewable technology facilities do not generate air emissions like conventional power plants, and they generally have relatively low water requirements. However, there are other potential impacts associated with their use. Construction of solar and geothermal plants and wind turbines can lead to habitat destruction and visual impacts. In addition, all forms of renewable energy would also

require the construction of transmission of the point of generation to the load served, which would create similar types of impacts as the Proposed Project.

- **Geothermal.** While geothermal plants produce far fewer emissions than combined-cycle gas plants, geothermal reservoirs contain varying levels of hydrogen sulfide gas (H₂S), which smells like rotten eggs and can be toxic at high concentrations. The odor can be a nuisance even at very low concentrations during drilling and plant start-up, but is not an issue during normal plant operations. Geothermal plants also emit very low levels of carbon dioxide (CO₂) and sulfur oxides. Reservoirs with high concentrations of boron have the potential to harm nearby plant life. In addition, mercury and arsenic from a geothermal reservoir can accumulate in scale in plant piping systems in concentrations high enough to require monitoring, special handling and regulated disposal as hazardous wastes. Binary plants, which have closed cycles, avoid many pollution problems because they have virtually no emissions.
- **Biomass.** Biomass facilities generate substantially greater quantities of air pollutant emissions than natural-gas burning facilities. These emissions vary depending upon the precise fuel and technology used. The collection of biomass fuels can have significant environmental impacts. Harvesting timber and growing agricultural products for fuel requires large volumes to be collected, transported, processed and stored. Biomass fuels may be obtained from supplies of clean, uncontaminated wood that otherwise would be landfilled or from sustainable harvests. On the other hand, the collection, processing and combustion of biomass fuels may cause environmental problems if, for example, the fuel source contains toxic contaminants, agricultural waste handling pollutes local water resources, or burning biomass deprives local ecosystems of nutrients that forest or agricultural waste may otherwise provide.
- **Solar.** While solar generation facilities do not generate air emissions and have relatively low water requirements, there are other potential impacts associated with their use. Construction of solar thermal plants can lead to habitat destruction and visual impacts. PV systems can also have negative visual impacts, especially if ground-mounted. Furthermore, PV installations are highly capital intensive, and manufacturing of the panels generates some hazardous wastes.
- **Wind.** In addition, to the land and transmission lines that would be required for renewable technologies, wind turbines can create other environmental impacts, as summarized below (AWEA, 2004):
 - Erosion can be a concern in certain habitats such as the desert or on mountain ridgelines. Standard engineering practices can be used to reduce erosion potential.
 - Birds collide with wind turbines. Avian deaths have become a concern at Altamont Pass in California, which is an area of extensive wind development and also high year-round raptor use.
 - Wind energy can negatively impact birds and other wildlife by fragmenting habitat, both through installation and operation of wind turbines themselves and through the roads and power lines that may be needed.
 - Bat collisions at wind plants generally tend to be low in number and to involve common species, which are quite numerous. A high number of bat kills at a new wind plant in West Virginia in the fall of 2003 has raised concerns, and the problem of bat mortality at that site is currently under investigation.
 - Visual impacts of wind power fields can be significant, and installation in scenic and high traffic areas often results in strong local opposition.

- Noise was an issue with some early wind turbine designs, but it has been largely eliminated as a problem through improved engineering and through appropriate use of setbacks from nearby residences. Aerodynamic noise has been reduced by changing the thickness of the blades' trailing edges and by making machines “upwind” rather than “downwind” so that the wind hits the rotor blades first, then the tower (on downwind designs where the wind hits the tower first, its “shadow” can cause a thumping noise each time a blade passes behind the tower). A small amount of noise is generated by the mechanical components of the turbine.
- **Hydroelectric.** Negative aspects of hydroelectric development primarily center around inundation to reaches of stream and riparian lands as a result of dam and reservoir development, that result in permanent changes to the environment. These include creating barriers for fish passage, displacing native plant and animal species, and eliminating whitewater recreation areas. Hydroelectric developments with large water storage components can create the potential for flooding downstream from high releases during storm events or due to catastrophic dam failures. Construction of new dams and maintenance of old structures must undergo rigorous design analyses that demonstrate the ability to perform safely under the most adverse seismic and flood conditions.

C.5.5.3 Conservation and Demand-Side Management

Description

For the past 30 years, while per capita electricity consumption in the United States has increased by nearly 50 percent, California electricity use per capita has been relatively flat. This achievement is the result of continued progress in cost-effective building and appliance standards and ongoing enhancements to efficiency programs implemented by investor-owned utilities (IOUs), customer-owned utilities, and other entities. Since the mid-1970s, California has regularly increased the energy efficiency requirements for new appliances sold and new buildings constructed here. In addition, in a creative and precedent-setting move, the CPUC in the 1980s de-coupled the utilities' financial results from their direct energy sales, facilitating utility support for efficiency programs. These efforts have reduced peak capacity needs by more than 12,000 MW and continue to save about 40,000 gigawatt hours (GWh) per year of electricity (CPUC & CEC, 2005). SCE's 2005 Energy Efficiency Annual Report states that the 2004 results from all of SCE's 2004-2005 energy efficiency programs provided nearly 950 million kilowatt-hours (kWh) of net annualized energy savings, 175 megawatts (MW) of net peak demand reduction, and over \$570 million of resource benefits (SCE, 2005b).

Rationale for Elimination

Project Objectives, Purpose, and Need. The Conservation and Demand-Side Management Alternative would not increase California's transmission import capability from the Southwest and nor would it enhance and support the competitive energy market in the Southwest. Therefore, this alternative would not meet most of the stated objectives of the Proposed Project.

Feasibility. Demand response programs are the most promising and cost-effective options for reducing peak demand on California's electricity system. Although the CPUC adopted demand reduction targets for investor-owned utilities in 2003, such as SCE, demand response programs have failed to deliver their savings targets for each of the last three years and appear unlikely to meet their targets for next year (CEC, 2005).

C.5.5.4 Distributed Generation

Description

Distributed Generation (DG) is generally considered to be generation, storage, or demand-side management devices, measures, and/or technologies connected to the distribution level of the transportation and distribution grid, usually located at or near the intended place of use. There are many DG technologies, including microturbines, internal combustion engines, combined heat and power (CHP) applications, fuel cells, photovoltaics and other solar energy systems, wind, landfill gas, digester gas and geothermal power generation technologies. Distributed power units may be owned by electric or gas utilities, by industrial, commercial, institutional or residential energy consumers, or by independent energy producers. Distributed generation is the generation of electricity from facilities that are smaller than 50 MW in net generating capacity. Local jurisdictions — cities, counties and air districts — conduct all environmental reviews and issue all required approvals or permits for these facilities. Most DG facilities are very small, for example, a fuel cell can provide power in peak demand periods for a single hotel building.

Rationale for Elimination

Project Objectives, Purpose, and Need. While DG technologies are recognized as important resources to the region’s ability to meet its long-term energy needs, DG does not provide a means for SCE to meet its objectives for the project because of the comparatively small capacity of DG systems and the relatively high cost.

In addition, since it is usually located at or near the intended place of use, the DG Alternative would not increase California’s transmission import capability from the Southwest and nor would it enhance and support the competitive energy market in the Southwest. Therefore, this alternative would not meet most of the stated objectives of the Proposed Project.

Feasibility. Consideration of DG as an alternative to the Proposed Project is not feasible because no single entity has proposed implementing a substantial DG program. Also, a number of serious barriers, including technical issues, business practices, and regulatory policies, make interconnection to the electrical grid in the United States difficult. Broad use of distributed resources would likely require regulatory support and technological improvements. There could be regulatory feasibility issues with the lengthy permitting process. Air permits are generally the first permits sought for DG facilities because air district requirements influence equipment selection. Once the DG equipment has been selected, the land use approval process can begin. Local governments must know what makes and models of equipment will be installed to evaluate potential significant environmental impacts (e.g., noise and aesthetics) and to specify mitigation measures. Building permits are sought last because construction plans must incorporate all project changes required by the local government planning authority to mitigate environmental impacts. This lengthy permitting process would make it impossible to construct this technology within the timeframe of the Proposed Project.

In a January 2002 report on DG the CEC concluded that “DG is capable of providing several Transmission and Distribution (T&D) services, but the extent to which DG can be successfully deployed to effectively supply them are limited by (1) the technical capabilities of various DG technologies; (2) technical requirements imposed by the grid and grid operators; (3) business practices by T&D companies; and (4) regulatory rules and requirements . . . some technical barriers resulting from key characteristics of the prime mover will prevent some DG technologies from providing certain T&D services.” Some problems of specific types of distributed generation include the following:

- **Renewable Energy Sources.** As discussed above, the high cost and limited dispatchability of small-scale renewable energy sources such as solar and wind power essentially inhibit their market penetration. In addition, biomass and wind facilities require specific circumstances for siting (i.e., near sources of bio-fuel or in high wind areas), and have their own environmental consequences (e.g., requiring large land areas or resulting in large quantities of air emissions).
- **Fuel Cells.** The present high cost of and small generation capacity of fuel cells precludes their widespread use.
- **Other Fossil-fueled Systems.** Microturbines and various types of engines can also be used for distributed generation; these technologies are advancing quickly, becoming more flexible, and impacts are being reduced. However, they are still fossil-fueled technologies with the potential for significant environmental impacts, including noise. Such systems also have the potential for significant cumulative air quality impacts because individually they are typically small enough to avoid the regulatory requirements for air pollution control. Therefore, use of enough of these systems to constitute an alternative to the Proposed Project would potentially cause significant unmitigated air quality impacts.

Potential Environmental Impacts. Potential new impacts created by DG would depend on the type of generation that would be used. Impacts of solar and wind facilities are addressed above. Other types of DG have air quality and noise impacts.

C.6 No Project Alternative

Both CEQA and NEPA require an evaluation of a No Project or No Action Alternative in order for decision-makers to compare the impacts of approving the project with the impacts of not approving the project. Section C.6.1 describes the issues that affect the No Project Alternative, and Section C.6.2 describes what could occur in the No Project Alternative. The environmental effects of not approving the project are evaluated in each issue area's analysis in Section D.

C.6.1 Background

Consideration of the No Project Alternative is required by Section 15126.6(e) of the CEQA Guidelines, and NEPA requires the consideration of a No Action Alternative (40 C.F.R. 1502.14(c)). The analysis of the No Project Alternative must discuss the existing conditions at the time the Notice of Preparation was published (October 21, 2005), as well as: "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" [CEQA Guidelines Section 15126.6 (e)(2)]. The requirements also specify that: "If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed" [CEQA Guidelines Section 15126.6 (e)(3)(B)].

The No Action Alternative required under NEPA [40 C.F.R. 1502.14(c)] serves as a basis for comparison even if it would not satisfy the proposed action's purpose and need. The definition of the No Action Alternative depends on the nature of the project and in the case of the proposed DPV2 project the No Action Alternative describes what would occur without the federal agency's (BLM) approval. This EIR/EIS uses the CEQA term No Project Alternative to describe the No Action Alternative required by NEPA.

C.6.1.1 Economic Issues Affecting the No Project Alternative

The No Project Alternative has been studied by SCE and the CAISO as part of the economic evaluation of DPV2 (CAISO, 2005). The economic studies demonstrated that there were sufficient economic and transmission system reliability benefits to pursue the Proposed Project over the No Project Alternative. In choosing the Proposed Project over the No Project Alternative, the CAISO showed that although there would be some reliability benefits, substantial economic benefits could occur for California ratepayers with DPV2.

The economic context of the Proposed Project means that DPV2 is primarily driven by SCE's desire to reduce energy costs to California customers, not by a need for improved reliability (see Section A.2). The economic benefits would come mainly from lower energy costs based on the ability to access lower-cost energy supplies in the Southwest, particularly in Arizona. CAISO assumed that the costs of generating capacity would be lower in Arizona than California and that during early years of DPV2 a surplus of generating capacity will be available in Arizona (CAISO, 2005). By creating additional transmission infrastructure to increase the import of low-cost energy, DPV2 would not cause the disconnection or permanent shutdown of any of California's generating capacity, but existing generation in California would be operated for less time throughout the year.

Also, some California generators would be able to reduce their commitments to be available for grid and local area reliability reasons, for example in "reliability-must-run" (RMR) arrangements. This would reduce the level of payments made by SCE through CAISO to these California generators. Under the No Project Alternative, these economic benefits would not occur, and use of existing generation within California would continue.

C.6.1.2 Power Supply Issues Affecting the No Project Alternative

The economic studies done by CAISO for DPV2 show that by generally improving the efficiency of the transmission grid, the power supplied to California customers would come from different generators as a result of the Proposed Project (CAISO, 2005). Reducing generation from older and less efficient power plants in California and increasing generation from higher-efficiency power plants outside of California would provide an air emissions decrease in California, but an emissions increase in Arizona.

The CAISO has estimated that this shift in energy production will result in an approximate net annual reduction of 390 tons of NOx emissions in California and Arizona. Emissions of NOx within Arizona would increase roughly 200 tons per year, while NOx emissions within California would decrease approximately 590 tons per year (Appendix R of CAISO, 2005).¹⁰ The Proposed Project would shift generation so that approximately 450 power plants throughout the western states would be affected. With the Proposed Project, the CAISO model showed that approximately 200 power plants would increase their generation, while 250 plants would decrease as follows:

- Roughly 80 percent of the incremental generation would be produced by 11 plants, with nine of these 11 being in the Palo Verde area, such as Mesquite, Redhawk, and Harquahala.
- Decreased generation would occur at dozens of plants mainly in California. Roughly 80 percent of the decreased generation would occur primarily at less efficient plants such as Ormond Beach, Haynes,

¹⁰ CAISO Board Report, Economic Evaluation of the Palo Verde-Devers Line No. 2 (PVD2). Prepared by California ISO, Department of Market Analysis & Grid Planning, February 24, 2005.

and South Bay, and also at newer, more efficient plants such as Mountainview, High Desert, and Palomar.

Under the No Project Alternative, these power supply changes and emission benefits would not occur.

C.6.2 No Project Alternative Scenarios

Under the No Project Alternative, construction and operation of DPV2 would not occur. The baseline environmental conditions for the No Project Alternatives are the same as for the Proposed Project. These conditions are described in this EIR/EIS for each environmental discipline as the “environmental baseline” or “setting” in Section D. The baseline conditions would continue to occur into the future, undisturbed, in the absence of project-related construction activities.

The objectives of the Proposed Project would remain unfulfilled under the No Project Alternative. This means that the projected economic benefits of the Proposed Project would not occur, which could result in additional demand-side and supply-side actions becoming more viable. Additional demand response and energy conservation may occur, and supply-side actions could include accelerated development of low-cost generation or other new transmission projects. For example, 1,200 MW of transmission import capability into California would not be added, and the additional market competition and improved system reliability and operating flexibility associated with the Proposed Project would not occur.

No specific development scenario is envisioned, but certain consequences can be identified without undue speculation. The absence of the Proposed Project may lead SCE or other developers to pursue other actions to achieve the objectives of the Proposed Project. The events or actions that are reasonably expected to occur in the foreseeable future without DPV2 include the following:

- The existing transmission grid and power generating facilities would continue to operate without being reduced until other major generation or transmission projects could be developed.
- Continued growth in electricity consumption and peak demand within California is expected. To serve this growth, additional electricity would need to be internally generated or imported into California by existing facilities. Net air emissions reductions caused by reducing generation from older and less efficient power plants in California and increasing generation from higher-efficiency power plants outside of California would not occur.
- A continuation of baseline *demand-side* or *supply-side* actions may be expected to occur. *Demand-side* actions include additional energy conservation or load management. *Supply-side* actions can include accelerated development of generation, such as conventional, renewable, and distributed generation, or other major transmission projects. These are described in more detail below because they could lead to new adverse environmental effects. Development of other major transmission facilities or new generation triggered by the No Project Alternative would be unpredictable because this varies depending on a number of uncontrollable factors (e.g., energy cost, need, market forces).

C.6.2.1 Continuation of Demand-Side Actions

Demand-side management (e.g., conservation) and small-scale, localized generation (i.e., distributed generation or DG) could play an increased role in the SCE service territory under the No Project Alternative. Normally, demand-side management is fully pursued where technically and economically feasible. Under the No Project Alternative, the costs of developing DPV2 could be diverted to subsidize or improve the economic feasibility of some demand-side projects, although 1,200 MW of peak load

reduction would not be achievable for the cost of DPV2. Because reductions in the cost of energy supplies enabled by DPV2 would not occur, the access to low-cost energy provided by DPV2 would not occur and the enhanced competition among generating companies would not occur. This means that under the No Project Alternative, a greater level of demand-side control could become economically feasible.

Demand-Side Management and Conservation

Demand-side management (DSM) programs are described in more detail in Appendix 1 (Alternatives Screening Report). DSM programs reduce customer energy consumption and overall electricity use. Some programs attempt to shift energy use to off-peak periods, which allows generators to operate more steadily over the course of a day. DSM programs and peak-shifting do normally involve any noteworthy construction activities.

The CPUC supervises various demand-side management programs administered by the regulated utilities, and many municipal electric utilities have their own demand-side management programs. The combination of these programs constitutes the most ambitious overall approach to reducing electricity demand administered by any state in the nation. As such, reducing demand is an essential part of SCE's operations with or without the Proposed Project. Under the No Project Alternative, continuation of the current relatively high cost of energy may likely lead to increased conservation.

Distributed Generation

According to the California Energy Commission, distributed generation (DG) is the widespread generation of electricity from facilities that are smaller than 50 MW in net generating capacity. Most DG facilities are very small, for example, a fuel cell could provide power in peak demand periods for a single hotel building. More than 2,000 MW of DG are in place across California. Small business and retail customers of electricity normally install these systems to offset the power drawn from a utility such as SCE. Over the next ten years, the CPUC aims to provide incentives for up to 3,000 MW of new distributed generation State-wide, for customers who wish to install new "clean" onsite DG up to 1 MW (Self-Generation Incentive Program). DG is also described in more detail in Appendix 1 (Alternatives Screening Report).

Under the No Project Alternative, the continued relatively high cost of energy delivered to the SCE service territory may provide increased incentive for development of DG units by industrial, commercial, institutional, or residential energy consumers. There are many available DG technologies, including micro-turbines, internal combustion engines, combined heat and power (CHP) applications, fuel cells, photovoltaics, and other solar energy systems, wind, landfill gas, digester gas and geothermal power generation technologies. Local jurisdictions such as cities, counties, and air districts, would need to conduct environmental reviews and issue required approvals or permits for these facilities.

C.6.2.2 Continuation of Supply-Side Actions

Providing new power supply to meet California's growing demand occasionally involves development of generation, such as conventional, renewable, and distributed generation, or other major transmission projects. No new generation or major transmission facilities would be required if the DPV2 project is not constructed. The No Project Alternative could, however, accelerate development of alternate facilities.

The specific configuration of alternate facilities would vary depending on a number of uncontrollable factors (e.g., energy cost, need, market forces). Since the primary objectives of DPV2 are economic, new alternate facilities under any scenario would need to be economically competitive for developers to pursue. Such new facilities would probably be installed in locations with convenient and economical

access to fuel supplies, existing transmission facilities, and load centers. Construction and operation of new generation and transmission projects would be subject to separate permitting processes that would need to be completed in the future. Because the Proposed Project has been a subject of the planning and permitting processes for many years, it is doubtful that any major new generation or transmission projects would be able to come online any earlier than the expected DPV2 in service date.

Any combination of the following three supply-side scenarios could occur as part of the No Project Alternative:

- **Unchanged or Increased Dependence on Existing Generation in California.** Existing generation located in California may continue to run or run more frequently, which would cause greater use of older and more inefficient power plants, forfeiting the economic benefits of the Proposed Project. Continuing the dependence on existing generation would perpetuate and exacerbate “reliability-must-run” payments to generators in California, and it may cause certain power plant retirements to be postponed.¹¹ However, opportunities to develop or refurbish existing power plants near the load centers of southern California are limited, and there are lengthy timelines associated with planning, siting, and permitting major new generation or transmission facilities. As a result, this scenario is most likely to occur under the No Project Alternative.
- **Accelerated Development of Other Major Transmission Projects or Upgrades.** Other major transmission projects and upgrades may be built to achieve objectives similar to those of the Proposed Project. In its work with the Southwest Transmission Expansion Plan (STEP), the CAISO studied a number of other options that would increase the import capability into Southern California. The plan for DPV2 was established as preferable out of many far-reaching transmission alternatives that were studied by STEP.¹² No alternative transmission projects were found to yield the same level of cost benefit as the Proposed Project. In order to be an alternative to DPV2, a project would need to find a sponsor and undergo the planning and permitting processes, and it would be unlikely for any project sponsor to bring an alternative project online in time to meet the expected DPV2 in-service date. As such, no predictable transmission development scenario that can be reasonably expected to occur as part of the No Project Alternative.
- **Accelerated Development of New Generation in California or Elsewhere.** New, relatively efficient generation may be built in California to replace existing less efficient generation. With or without the Proposed Project, new facilities could be developed depending on the economic decisions made by project sponsors. Regardless of sponsor, planning, permitting, and construction of new generation facilities as an alternative to DPV2 would be unlikely to occur before the expected DPV2 in-service date. Because no project sponsors have been identified for a generation alternative, there is no predictable generation development scenario that can be reasonably expected to occur as part of the No Project Alternative. The discussion of “New Conventional Generation” as a project alternative is provided in Appendix 1 (Alternatives Screening Report).

If the Proposed Project is not approved or not constructed, project sponsors of alternate facilities would need to re-evaluate the prevailing economic conditions to determine the viability of alternate transmission or generation projects. SCE or other sponsors would need to develop alternative plans to achieve the largely

¹¹ The STEP process that established the plan for the DPV2 project assumed that the following units would be retired prior to 2008: San Bernardino 1 and 2 (125 MW), Mohave 1 and 2 (1580 MW), Etiwanda 1, 2, and 5 (391 MW), and El Segundo 1 and 2 (350 MW).

¹² STEP, Southwest Transmission Expansion Plan, 2003 Status Report. Economic results of study of new line between Arizona and California (pp. 33 to 35).

economic objectives of the Proposed Project. Although development of alternative projects could be accelerated, for analysis of the No Project Alternative, NEPA and CEQA require consideration of what can be reasonably expected to occur in the foreseeable future, based on current plans. Without alternative plans or sponsors for alternate facilities, it would be speculative to assume that any specific transmission or generation projects are foreseeable under the No Project Alternative.

C.7 References

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