

# Draft EIR/EIS Summary

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## 1 Introduction

Southern California Edison (SCE) filed an application (Application Number A.07-06-031) for a Certificate of Public Convenience and Necessity (CPCN) with the California Public Utilities Commission (CPUC) on June 29, 2007, for the construction and operation of the Tehachapi Renewable Transmission Project (TRTP or proposed Project). In addition, SCE filed an application for a Special Use authorization with the USDA Forest Service on June 29, 2007, seeking permission for the construction, operation, and maintenance of the TRTP on National Forest System (NFS) lands in the Angeles National Forest (ANF) because the proposed transmission lines (T/Ls) would traverse approximately 42 miles of NFS lands.

The TRTP, as proposed, would involve the construction, operation and maintenance of new and upgraded transmission infrastructure along approximately 173 miles of new and existing rights-of-way (ROW) in southern Kern County, portions of Los Angeles County, including the ANF and U.S. Army Corps of Engineers (USACE) lands, and the southwestern portion of San Bernardino County, California. SCE's stated objectives for the proposed Project are to: (1) accommodate the potential renewable power generation that has been identified in the Tehachapi Wind Resource Area (TWRA), thereby enabling SCE and other California utilities to comply with the California Renewables Portfolio Standard (RPS); (2) address projected load growth in the Antelope Valley; and (3) address South of Lugo transmission constraints. These objectives are further described in Section 1.6 below.

The CPUC is the State Lead Agency responsible for compliance with the California Environmental Quality Act (CEQA), and the USDA Forest Service is the Federal Lead Agency responsible for compliance with the National Environmental Policy Act (NEPA). Because the proposed Project also crosses approximately 6.4 miles of lands owned by the USACE, the USACE has elected to participate as a Cooperating Agency for the NEPA review of the Project. In addition, portions of Alternative 4 (Chino Hills Routes) cross land owned by the California Department of Parks and Recreation (CDPR), which would require discretionary approvals from both the California State Parks and Recreation Commission and CDPR. Therefore, both agencies are considered to be Responsible Agencies for the CEQA review of the Project.

A joint document has been prepared by the Lead Agencies (CPUC and Forest Service) that consists of a Draft Environmental Impact Report (EIR) prepared in compliance with State CEQA Guidelines and a Draft Environmental Impact Statement (EIS) prepared in compliance with NEPA guidance. The EIR/EIS discloses the environmental impacts expected to result from the construction and operation of SCE's proposed Project and mitigation measures, which if adopted by the Lead Agencies, could avoid or minimize significant environmental effects. In accordance with CEQA/NEPA guidance, the EIR/EIS also evaluates alternatives (including the No Project/Action Alternative) to the proposed Project that address significant environmental issues associated with the Project. A wide range of potential alternatives were considered and a screening process was used to identify alternatives that: (1) were feasible; (2) fulfilled the Project's purpose and need; and (3) addressed significant issues associated with SCE's proposed Project. The process used to identify, evaluate, and screen potential alternatives is described in the Alternatives Screening Report in Appendix A of the EIR/EIS. The alternatives that met the CEQA/NEPA criteria and were carried forward for detailed analysis are fully described in Chapter 2 (Description of Alternatives) of the EIR/EIS. The alternatives, including SCE's proposed Project, are analyzed across 16

environmental issue areas in Chapter 3 (Affected Environment and Environmental Consequences) of the EIR/EIS. The EIR/EIS presents an analysis of the environmental effects of the Project and alternatives, recommends mitigation measures to address adverse impacts, and provides a comparison of the environmental effects of the proposed Project and the alternatives. This Executive Summary (ES) provides an overview of the proposed Project and alternatives considered, and the environmental findings and mitigation measures of the EIR/EIS.

*The Tehachapi Renewable Transmission Project EIR/EIS is an information document only and does not make a recommendation regarding the approval or denial of the Project. The purpose of the EIR/EIS is to inform the public and decision-makers about the environmental effects of the proposed Project and alternatives. The information in the EIR/EIS will be used by the CPUC and Forest Service in deciding to approve or deny SCE's requested approvals from each agency, and will also be used by any other agencies that need to issue discretionary approvals or permits for the Project.*

## **1.1 Background**

### **Renewables Portfolio Standard Requirements**

While the TRTP is proposed to integrate new wind generation in the TWRA, the need for this Project arose from the mandates of the California RPS. The California RPS was established in 2002 by Senate Bill 1078, and requires investor-owned utilities, including retail sellers of electricity such as SCE, to increase their sale of electricity produced by renewable energy sources (such as wind) by at least one percent per year, achieving 20 percent by 2017. These requirements were accelerated by the passage of Senate Bill 107 to be consistent with the Energy Action Plan (EAP) adopted in 2003. The EAP adopted by the CPUC, California Energy Commission (CEC), and the now defunct California Power Authority pledged that the agencies will accelerate RPS implementation to meet the 20 percent goal by 2010 instead of 2017 (CEC, 2007).

The Public Resources Code (Section 25740) and the Public Utilities Code (Section 399.15) have been amended to include the most recent RPS target requiring investor-owned utilities to procure 20 percent of their total retail sales from renewable energy resources by 2010. However, a more aggressive RPS goal of procuring 33 percent renewable energy by the year 2020 is currently proposed by the State, and Governor Schwarzenegger has directed the CEC to study the feasibility of this goal (CEC, 2007).

### **Tehachapi Wind Resource Area**

As a crucial step in meeting the California RPS goals, the CPUC must explore possibilities for the removal of constraints on the transmission of electricity from its point of generation to its point of use, referred to as the "load center". In order for SCE and other investor-owned utilities to satisfy the target goal of procuring 20 percent renewable energy by 2010, new transmission facilities are required to interconnect remote areas of high renewable power generation, such as the TWRA, to areas of high load, including portions of the Los Angeles and San Bernardino metropolitan areas that are within the SCE service area.

The TRTP would provide the necessary transmission network to interconnect proposed wind generation in the TWRA, which is considered one of the largest resources for wind energy in California (TCSG, 2005). The CEC has estimated that there is approximately 4,500 MW of potential wind development in the Tehachapi and Antelope Valley region (TCSG, 2006). In order to assess the ability of this region to contribute toward meeting the State's mandated RPS goals, the CPUC issued Decision 04-06-010 which

ordered the formation of a collaborative study group to develop a comprehensive transmission development plan for wind energy in the Tehachapi area (CPUC, 2004). This decision also required SCE to prepare and file a certificate of public convenience and necessity (CPCN) application<sup>1</sup> for Tehachapi transmission upgrades in coordination with the recommendations of the collaborative study group (CPUC, 2004).

In conjunction with the Tehachapi Collaborative Study Group (TCSG), SCE has identified a phased development plan for transmission infrastructure in the TWRA (TCSG, 2006). The purpose of this phased transmission plan, called the Tehachapi Transmission Project (TTP), is to accommodate the generation of renewable wind energy in the Tehachapi region. The TTP is being implemented in separate phases, where the proposed TRTP is Phase 3. The approved Antelope-Pardee 500-kV Transmission Project or Antelope Transmission Project Segment 1 represents Phase 1 of the TTP, while the approved Antelope Transmission Project Segments 2 & 3 represents Phase 2 of the TTP. The CPCN applications for each of these three phases of the TTP were submitted separately for consideration by the CPUC over a period of several years and, as such, separate environmental analyses have been prepared to analyze and disclose the potential environmental effects of constructing, operating, and maintaining each of the three phases.

According to the CEC's 2005 Integrated Energy Policy Report (IEPR), "California needs major investments in new transmission infrastructure to interconnect with remote renewable resources in the Tehachapi and Imperial Valley areas, without which it will not be able to meet its RPS targets" (CEC, 2005). California RPS targets are required by Public Utilities Code Section 399.14. The IEPR further explains that the "Tehachapi area transmission projects" proposed by SCE, which include the proposed TRTP, are critical in order to facilitate the development of renewable energy resources required by the State RPS targets and recommends that these phases of the TTP should move forward "expeditiously."

### **Projected Load Growth and Transmission Constraints**

In addition to contributing toward RPS compliance, the TRTP would satisfy the Project objectives of improving SCE's transmission system reliability and mitigating existing transmission constraints. The Antelope Valley area has experienced above-average electrical demand growth and is forecast to continue above-average growth of about five percent per year. SCE currently forecasts that the bulk transmission system facilities in this area will experience reliability problems by 2011. Currently, operating procedures that are used to mitigate reliability problems during heavy load conditions are not considered sufficient to mitigate thermal overload on the existing Antelope-Mesa and Antelope-Vincent 220-kV transmission lines. As part of SCE's development plan for the Tehachapi area, the proposed TRTP would include transmission upgrades north of Vincent Substation that would interconnect and transmit the electrical power from new generation resources in order to both reliably serve the load requirements for the Antelope Valley and deliver power to Vincent Substation.

The Project would also improve the reliability of the California Independent System Operator (CAISO)-controlled transmission network within the South of Lugo transmission corridor, which is an existing transmission path between the northern portion of SCE's service territory and the greater Los Angeles Basin. The current network configuration transports power flowing from northern California and southern Nevada to Lugo Substation. The power is then transported to load centers in the Los Angeles Basin via three 500-kV transmission lines that run south from Lugo Substation through the Cajon Pass along the I-

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<sup>1</sup> The CPUC is charged with regulating privately owned utility infrastructure. As set forth in the California Public Utilities Code, no investor-owned utility may construct or expand a transmission line or generating facility without obtaining a CPCN from the CPUC (PUC Sections 1001 to 1013; 1091 to 1102).

15 freeway and terminate at Mira Loma Substation. The Cajon Pass is subject to annual forest fires that affect collocated transmission lines, as demonstrated in 2002 when all three of the existing 500-kV transmission lines were lost due to a forest fire. SCE also anticipates that the South of Lugo transmission corridor will exceed its current transfer capability limitation, creating a bottleneck within the CAISO transmission network. To relieve this bottleneck and to mitigate the loss of transmission from future forest fires, the proposed TRTP would provide additional transmission paths into Mira Loma Substation and would increase the substation's total import capability from 6,400 MW to 7,400 MW.

### **Executive Order 13212**

In response to a clearly identified need to improve energy transmission infrastructure throughout the country, President George W. Bush issued Executive Order 13212 on May, 18, 2001, in order to encourage the expedited and environmentally responsible development of transmission infrastructure. This Executive Order consists of four sections as follows: Section 1 (Policy); Section 2 (Actions to Expedite Energy-Related Projects); Section 3 (Interagency Task Force); and Section 4 (Judicial Review). With regard to the expedited agency review of permits and other relevant documents (including environmental analyses) Section 2 states the following:

*For energy-related projects, agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections. The agencies shall take such actions to the extent permitted by law and regulation, and where appropriate. (CEQ, 2001)*

In observance of this Executive Order and to the greatest extent feasible, the Lead Agencies for the proposed TRTP have worked in coordination with the Project proponent (SCE) to fully analyze the proposed Project and alternatives in compliance with NEPA and CEQA and to expedite the environmental review process.

## **1.2 The CEQA/NEPA Process**

The CPUC and Forest Service determined that the proposed Project could cause a significant adverse effect on the environment and, therefore, initiated the preparation of an EIR/EIS. The CPUC filed a Notice of Preparation (NOP) with the State Clearinghouse (SCH #2007081156) and the Forest Service published a Notice of Intent (NOI) in the *Federal Register* (Vol. 72, No. 173, September 7, 2007). These notices formally initiated a public scoping period during which public and agency input was solicited regarding the scope of issues that should be addressed in the EIR/EIS.

In accordance with CEQA/NEPA, the EIR/EIS must be completed before the Lead Agencies make any decision to approve the Project. The EIR/EIS must disclose a project's expected impacts on the environment, recommend measures to reduce or avoid significant impacts, and analyze a reasonable range of feasible alternatives to the proposed Project. The purpose of this process is to inform the public about the impacts of the Project and to provide information to agency decision makers that could aid them in their decision(s) regarding the Project.

Copies of the Draft EIR/EIS are distributed for public review and comment and are also submitted to the State Clearinghouse, Environmental Protection Agency (USEPA), as well as responsible, trustee, and cooperating agencies as defined by CEQA/NEPA. A Notice of Availability (NOA) of the Draft EIR/EIS is published in local newspapers, and posted with the county clerk. The NOA is mailed to approximately 15,000 contacts on the Project mailing list, which includes property owners, public agencies, and

community interest groups and organizations. In compliance with NEPA (40 CFR 1506.6(b)(2)), a NOA of the Draft EIS must also be published in the *Federal Register*, thus beginning the public comment period. The NOA is also mailed to the USEPA, which is required to review all EISs; the USEPA is also responsible for publishing the NOA once it is received (40 CFR 1506.9, 1506.10). The Draft EIR/EIS is made available for public review and comment for a 45-day public review period.

Responses to substantive comments received on the Draft EIR/EIS are prepared by the Lead Agencies and published in the Final EIR/EIS. The Final EIR/EIS may also present additional information in response to comments made on the Draft EIR/EIS and include minor corrections to the Draft EIR/EIS that were discovered during the comment period.

Responses to substantive comments received on the Draft EIR/EIS will be prepared by the Lead Agencies and published in the Final EIR/EIS in accordance with State CEQA Guidelines §15088, NEPA Regulations 40 CFR 1502.9, and Forest Service guidelines FSH 1909.15-2008-1.24.1. The Final EIR/EIS may present additional information in response to comments made on the Draft EIR/EIS and may include minor corrections to the Draft EIR/EIS that were discovered during the comment period, which may include the following: modification to the proposed Project or Project alternatives; development and evaluation of alternatives not previously considered by the agency; improvement or modification of the Project analysis as needed; factual corrections; and/or explanation as to why certain comments do not warrant further agency response. If the changes are minor and do not rise to a level requiring preparation of a Supplement to an EIR (State CEQA Guidelines §15163) or a Supplemental EIS (NEPA 1502.9(c)(1)), a Final EIR/EIS is prepared. Once the Final EIR/EIS is complete, another NOA is published in the *Federal Register* by the USEPA.

After the Final EIR/EIS has been reviewed and approved by the Lead Agencies, the federal Lead Agency prepares a Record of Decision (ROD) in accordance with NEPA requirements (40 CFR 1505.2). The ROD provides a public record explaining why the federal Lead Agency chose a particular course of action. Although the ROD typically cannot be approved until at least 30 days after the NOA for the Final EIR/EIS is published in the *Federal Register*, 40 CFR 1506.10(b)(2) provides an exception for Lead Agencies which have a formal appeal process, including the USDA Forest Service. Therefore, in this case the deciding officer may sign the ROD at the same time the NOA for the Final EIR/EIS is published in the *Federal Register*. The federal Lead Agency's approval decision, as documented in the ROD, cannot be implemented any sooner than 50 days after the date the legal notice is published in the newspaper of record publicizing the decision of the Lead Agency (36 CFR 215.7; 36 CFR 215.9 (a)).

Similar to the required federal process, State CEQA Guidelines §15090 requires that the CEQA Lead Agency review the Final EIR/EIS and certify the document's adequacy under CEQA prior to taking any action to approve the Project or an alternative to the Project. If the Final EIR/EIS determines that the proposed Project would lead to one or more significant environmental effects that cannot be mitigated to a less-than-significant level, the Lead Agency must make specific findings regarding its approval of the Project (State CEQA Guidelines §15091). These findings must either state that alterations have been made to the Project to avoid or substantially reduce each significant impact, or that specific economic, legal, social, technological, or other considerations make mitigation of a significant impact infeasible.

If the CEQA Lead Agency decides to approve the proposed Project or an alternative to the proposed Project even though significant unavoidable impacts would occur, the Lead Agency must prepare and adopt a Statement of Overriding Considerations (SOC), which explains why the significant and unavoidable environmental impacts associated with the Project are acceptable when compared to the

benefits of the proposed Project or an alternative to the Project (State CEQA Guidelines §15093). If an SOC is required, it must be prepared and adopted before the Lead Agency takes action to approve the proposed Project or selected alternative. The CEQA Lead Agency must also file a Notice of Determination (NOD) with the California State Clearinghouse within five working days after approval of a Project for which an EIR was prepared (State CEQA Guidelines §15094).

The proposed Project or approved alternative to the Project cannot be initiated before the EIR/EIS is finalized, the CEQA-specific findings (including the SOC) are approved, the NEPA-required ROD is signed and approved (specifically for Project activities on federal lands), and an approval is granted by the CEQA Lead Agency. In addition, various other agencies may need to provide approvals prior to Project initiation (see Section 1.3 of the EIR/EIS). These agencies will utilize the information contained in the Final EIR/EIS in making their decisions regarding permits and approvals required for the Project.

### 1.3 Overview of the Proposed Project and Alternatives

Below is an overview of the alternatives considered as part of the EIR/EIS, followed by Table 1, which provides a summary of the major components of each alternative. Pursuant to CEQA (Guidelines §15126.6(a)) and NEPA (40 CFR 1505.1(e)), a reasonable range of alternatives to SCE's proposed Project (Alternative 2) were examined and were selected based on the following criteria: (1) the alternative's potential to meet most of the Project objectives/purpose and need, (2) the feasibility of the alternative, and (3) the alternative's ability to avoid or lessen adverse effects of SCE's proposed Project. As required under State CEQA Guidelines Section 15126.6(e) and NEPA Section 1502.14(d), a No Project/Action alternative was also considered (Alternative 1). The proposed Project and alternatives include the following:

**Alternative 1: No Project/Action Alternative.** Under the No Project/Action Alternative the Tehachapi Renewable Transmission Project, as proposed, would not be implemented. As such, none of the associated Project activities would occur and the environmental impacts associated specifically with the proposed Project would not occur. However, in the absence of the Project, SCE still would continue to operate and maintain the existing transmission infrastructure, including access roads and spur roads, for operations and maintenance purposes under a variety of agreements (landowners) and permits (Forest Service and USACE). For example, within the ANF, approximately 80 miles of roads are currently being used to access the existing structures along Segments 6 and 11, which the use and maintenance of is authorized through existing roads permits issued by the Forest Service. SCE would also be required to interconnect and integrate power generation facilities into its electric system, as required under Sections 210 and 212 of the Federal Power Act (16 U.S.C. § 824 [i] and [k]) and Sections 3.2 and 5.7 of the CAISO's Tariff. Various scenarios related to electricity generation and transmission reasonably expected to occur in the foreseeable future under the No Project/Action Alternative are identified in Section 2.1.

**Alternative 2: SCE's Proposed Project.** SCE's proposed Project would involve construction, operation, and maintenance of new and upgraded transmission infrastructure along approximately 173 miles of new and existing rights-of-way (ROW) from the TWRA in southern Kern County, south through Los Angeles County and the ANF, and east to the existing Mira Loma Substation in Ontario, San Bernardino County, California. The proposed Project would traverse approximately 42 miles of NFS lands in the ANF, as well as about 6.4 miles of lands that are owned by the USACE at Santa Fe Dam and Whittier Narrows in Los Angeles County. Primary components of SCE's proposed Project include the following:

- Build a new single-circuit 500-kV T/L traveling approximately 16.8 miles in new ROW between the approved Windhub Substation and the proposed new Whirlwind Substation (Segment 10).

- Build two new single-circuit 220-kV T/Ls for approximately four miles (traveling parallel) in new ROW between the proposed (not part of Project) Cottonwind Substation to the proposed new Whirlwind Substation (Segment 4 – 220 kV).
- Build a new single-circuit 500-kV T/L for approximately 15.6 miles in new ROW between the proposed new Whirlwind Substation to the existing Antelope Substation (Segment 4 – 500 kV).
- Rebuild approximately 17.8 miles of the existing Antelope-Vincent 220-kV T/L and the existing Antelope-Mesa 220-kV T/L to 500-kV standards in existing ROW between the existing Antelope and Vincent Substations (Segment 5).
- Rebuild approximately 18.7 miles of existing 220-kV T/L to 500-kV standards between the existing Vincent and Gould Substations and construct a new 220-kV circuit on the vacant side of the existing double-circuit structures of the Eagle Rock-Mesa 220-kV T/L between the existing Gould and Mesa Substations (Segment 11).
- Rebuild approximately 31.9 miles of existing 220-kV T/L to 500-kV standards from the existing Vincent Substation to the southern boundary of the ANF, including approximately 26.9 miles of the existing Antelope-Mesa 220-kV T/L and approximately five miles of the existing Rio Hondo-Vincent 220-kV No. 2 T/L (Segment 6).
- Rebuild approximately 15.8 miles of existing Antelope-Mesa 220-kV T/L to 500-kV standards from the southern boundary of the ANF to the existing Mesa Substation (Segment 7).
- Rebuild approximately 33 miles of existing Chino-Mesa 220-kV T/L to 500-kV standards from a point approximately two miles east of the existing Mesa Substation (the “San Gabriel Junction”) to the existing Mira Loma Substation (Segments 8A/8C). Also rebuild approximately seven miles of the existing Chino-Mira Loma No. 1 line from single-circuit to double-circuit 220-kV structures (Segment 8B). (Segment 8)
- Build the new Whirlwind Substation, a 500/220-kV substation located approximately four to five miles south of the proposed (not part of Project) Cottonwind Substation near the intersection of 170<sup>th</sup> Street and Holiday Avenue in Kern County near the TWRA (Segment 9).
- Upgrade the existing Antelope, Vincent, Mesa, Gould, and Mira Loma Substations to accommodate new T/L construction and system compensation elements (Segment 9).
- Install associated telecommunications infrastructure.
- Apply approved herbicides to select invasive plant species in the Project area on NFS lands within the ANF.

**Alternative 3: West Lancaster Alternative.** This alternative would re-route the new 500-kV T/L in Segment 4, which is currently proposed along 110<sup>th</sup> Street West, 0.5 miles farther west along 115<sup>th</sup> Street West. As with the proposed Project, Alternative 3 would traverse approximately 42 miles of NFS lands in the ANF and 6.4 miles of lands that are owned by the USACE. This alternative represents a refinement of the applicant’s proposed Project that would place the T/L along an undeveloped area instead of through development thereby minimizing disturbance to current residences or access to properties located along the paved 110<sup>th</sup> Street West. As such, land use impacts and visual impacts would be reduced.

**Alternative 4: Chino Hills Alternatives.** Four variations to the Chino Hills State Park (CHSP) alternatives considered by SCE in its Proponent’s Environmental Assessment (RA Eliminated 6, Options 1 and 2) have been included in the EIR/EIS, as described below. These routing options have been retained for further analysis, as each would avoid proximity of the T/L to existing residences of the City of Chino Hills; and implementation of one of these routing options would eliminate construction of approximately 16 miles of 500-kV structures along Segment 8A, and eliminate construction in Segments 8B and 8C between Chino Substation and Mira Loma Substation.

- **Route A** would place a new double-circuit 500-kV T/L in Segment 8A through Chino Hills State Park (CHSP) parallel to an existing double-circuit 220-kV T/L. This alternative route would require construction of a new 500-kV switching station in CHSP, which would allow the new 500-kV T/L to connect to existing 500-kV T/Ls located in this area that provide connections to the Mira Loma Substation.

- **Route B** represents a refinement to Alternative 4 Route A, in which a new double-circuit 500-kV T/L in Segment 8A would be routed completely through CHSP parallel to an existing double-circuit 220-kV T/L. This alternative route would require construction of a new 500-kV switching station, which would be located east of and outside of the CHSP, and would allow the new double-circuit 500-kV T/L to connect to existing 500-kV T/Ls located in this area that provide connections to the Mira Loma Substation.
- **Route C** represents a refinement to Alternative 4 Route A, in which a new double-circuit 500-kV T/L in Segment 8A would be placed parallel to an existing double-circuit 220-kV T/L up to CHSP. At this point, this alternative route would turn east for approximately 2.4 miles, remaining just north of the CHSP boundary, to a new 500-kV switching station. A portion of the existing single-circuit 500-kV T/Ls within CHSP would be re-routed to tie into the new switching station, which would allow the new double-circuit 500-kV T/L to connect to these existing 500-kV T/Ls to allow power flow to continue on to the Mira Loma Substation. In addition, a portion of the existing 220-kV T/L within CHSP would be re-routed outside of CHSP, paralleling the new 500-kV T/L from just west of the CHSP boundary to the new switching station, and would then re-enter CHSP paralleling the re-routed 500-kV T/Ls to reconnect with the existing 220-kV T/L.
- **Route D** represents a refinement to Alternative 4 Route A, in which a new double-circuit 500-kV T/L in Segment 8A would be placed parallel to an existing double-circuit 220-kV T/L up to CHSP. At this point, the alternative route would turn east and proceed to follow the northern boundary of CHSP for approximately 4.2 miles, then just east of Bane Canyon the alignment would turn southeast and cut across CHSP for approximately 1.3 miles to a new 500-kV switching station located immediately east of the boundary of CHSP. This switching station would allow the new double-circuit 500-kV T/L to connect to existing 500-kV T/Ls located in this area to provide connections to the Mira Loma Substation.

As with the proposed Project, Alternative 4 (including all routing options) would traverse approximately 42 miles of NFS lands in the ANF and 6.4 miles of lands that are owned by the USACE.

**Alternative 5: Partial Underground Alternative.** This alternative would utilize Gas-Insulated Line (GIL) technology to place the proposed overhead lines underground along Segment 8A through the City of Chino Hills from approximately S8A MP 21.9 to 25.4 to reduce significant visual impacts and address other community concerns. As with the proposed Project, Alternative 5 would traverse approximately 42 miles of NFS lands in the ANF and 6.4 miles of lands that are owned by the USACE.

**Alternative 6: Maximum Helicopter Construction in the ANF Alternative.** This alternative would utilize helicopter construction within the ANF to the maximum extent feasible. This alternative was requested by the Forest Service to reduce ground disturbance within the ANF by minimizing new road construction through the use of helicopter construction. Helicopter staging/support areas have been identified in the vicinity of Segments 6 and 11 to provide for helicopter construction activities within the ANF. A total of 143 new 500-kV towers would be constructed by helicopter under this alternative: 87 along Segment 6 and 56 along Segment 11. As with the proposed Project, Alternative 6 would traverse approximately 42 miles of NFS lands in the ANF and 6.4 miles of lands that are owned by the USACE. Any detailed changes to the identified helicopter staging/support areas that are identified after publication of the Draft EIR/EIS will be addressed in the Final EIR/EIS. Invasive plant species will be surveyed for and controlled using manual techniques and approved herbicides within the Project area on NFS lands on the ANF.

**Alternative 7: 66-kV Subtransmission Alternative.** This alternative is comprised of three 66-kV subtransmission line elements, including the following: (1) Undergrounding the existing 66-kV subtransmission line on Segment 7 through the River Commons at the Duck Farm Project (Duck Farm Project) between MP 8.9 and MP 9.9 of Segment 7 as requested by the Board of Supervisors County of Los Angeles to minimize the Project's effects to passive recreation opportunities in the planned Duck Farm Project area; (2) Re-routing and undergrounding the existing 66-kV subtransmission line around the



Whittier Narrows Recreation area along Segment 7 (S7 MP 11.4 to 12.025) to provide habitat enhancement for least Bell's vireos as identified by SCE; and (3) Re-routing the existing 66-kV subtransmission line around the Whittier Narrows Recreation Area along Segment 8A between the San Gabriel Junction at S8A MP 2.2 and S8A MP 3.8 to provide habitat enhancement for least Bell's vireos, as identified by SCE. As with the proposed Project, Alternative 7 would traverse approximately 42 miles of NFS lands in the ANF; however, this alternative would also traverse approximately 7.9 miles of lands that are owned by the USACE, which is about 1.5 miles more USACE lands than the proposed Project or other Project alternatives.

## 1.4 Summary of Public Involvement Activities

The following is a summary of the public involvement activities conducted by the CPUC and/or Forest Service to date:

- The NOP was filed with the State Clearinghouse on August 31, 2007 (SCH# 2007071076), which initiated the public scoping period. The 39-day review period for the NOP ended on October 8, 2007. The NOP also included notice of the seven public scoping meetings for the proposed Project that were held between September 6 and September 20, 2007, in the cities of Altadena, Chino Hills, Duarte, Palmdale, Rosamond, Rosemead, and Whittier, California.
- Copies of the NOP were distributed to federal, State, regional, local agencies, Native American tribal representatives, elected officials, property owners, and other interested parties. Forty-nine (49) additional copies of the NOP were delivered to the local repository sites.
- A public scoping meeting notice, which contained information similar to that required by CEQA for the NOP, was mailed to over 15,000 individuals and agencies, and published in five newspapers.
- The NOI was published in the Federal Register on September 7, 2007 (FR Vol. 72, No. 173, p. 51404) to notify interested parties of the project and to solicit their participation in determining the scope of the EIS.
- The CPUC and Forest Service held nine public scoping meetings in seven locations along the proposed route between the dates of September 6 and September 20, 2007. The nine public scoping meetings provided an opportunity for the public and government agencies to obtain more information on the proposed Project, to learn more about the CEQA and NEPA environmental review processes, to ask questions regarding the proposed Project, and to provide formal scoping comments.
- As part of the scoping process for the EIR/EIS in September and October 2007, the City of Chino Hills suggested a route alternative for consideration in the EIR/EIS. Since the time of the original suggestion, the City of Chino Hills identified three additional variations. As part of the Lead Agencies' review of Project alternatives, the CPUC and Forest Service held a public meeting on January 17, 2008, to receive public comments on the City's suggested alternatives.
- The time, date, and location of the public scoping meetings were advertised in 15 local newspapers. The advertisements provided a brief synopsis of the Project and encouraged attendance at the meetings to share comments on the proposed Project.
- The CPUC also provided opportunities for the public and agencies to ask questions or make comments on the TRTP outside of the meetings. A Project website, phone/fax hotline, and e-mail address were established and made available during the public comment period.
- Information about the TRTP was made available through the Project website hosted by the CPUC. During the August/October 2007 scoping period, the website included electronic versions of the Project application, NOP, NOI, and Project-related maps, providing another public venue to learn about the Project. The website will remain a public information resource for the CPUC's environmental review of the proposed Project, and will announce future public meetings and hearings.

<b>Table 1. Summary Comparison of Components of the Proposed Project and Alternatives</b>						
	<b>Alternative 2</b> (SCE's Proposed Project)	<b>Alternative 3</b> (West Lancaster)	<b>Alternative 4</b> (Chino Hills Routes)	<b>Alternative 5</b> (Partial Underground)	<b>Alternative 6</b> (Max. Helicopter in ANF)	<b>Alternative 7</b> (66-kV Subtransmission)
<b>Overall Project Construction</b>						
Total length of 500-kV and 220-kV T/L (miles)	172.9	173.3	Route A: 156.3 plus 0.85 for existing T/L modifications (approx. 157 miles total) Route B: 159.8 plus 0.95 for existing T/L modifications (approx. 161 miles total) Route C: 155.8 plus 7.0 for re-routing existing 220/500kV T/Ls (approx. 163 miles total) Route D: 159.9 plus 0.95 for existing T/L modifications (approx. 161 miles total)	172.9	172.9	172.9
Total number of new transmission structures (not including 66-kV sub-T/Ls)	853	852	Route A: 762 Route B: 781 Route C: 802 Route D: 791	838	853	853
Total disturbance during construction (acres)	1,538 (±15%: 1,307 to 1,769)	1,538* (±15%: 1,307 to 1,769)	Route A: 1,512 (±15%: 1,269 to 1,755) Route B: 1,539 (±15%: 1,291 to 1,788) Route C: 1,567 (±15%: 1,313 to 1,822) Route D: 1,549 (±15%: 1,298 to 1,800)	1,563 (±15/20%: 1,309 to 1,816)	1,456 (±15%: 1,237 to 1,674)	1,538** (±15%: 1,307 to 1,769)
NFS lands (acres)	272 (±15%: 231 to 312)	272 (±15%: 231 to 312)	272 (±15%: 231 to 312)	272 (±15%: 231 to 312)	203 (±15%: 172 to 233)	272 (±15%: 231 to 312)
Total permanent disturbance (acres)	277 (±15%: 235 to 318)	277* (±15%: 235 to 318)	Route A: 291 (±15%: 246 to 336) Route B: 281 (±15%: 238 to 324) Route C: 287 (±15%: 243 to 332) Route D: 290 (±15%: 245 to 335)	280 (±15/20%: 237 to 323)	230 (±15%: 196 to 265)	277** (±15%: 235 to 318)

<b>Table 1. Summary Comparison of Components of the Proposed Project and Alternatives</b>						
	<b>Alternative 2 (SCE's Proposed Project)</b>	<b>Alternative 3 (West Lancaster)</b>	<b>Alternative 4 (Chino Hills Routes)</b>	<b>Alternative 5 (Partial Underground)</b>	<b>Alternative 6 (Max. Helicopter in ANF)</b>	<b>Alternative 7 (66-kV Subtransmission)</b>
NFS lands (acres)	109 (±15%: 93 to 125)	109 (±15%: 93 to 125)	109 (±15%: 93 to 125)	109 (±15%: 93 to 125)	62 (±15%: 53 to 72)	109 (±15%: 93 to 125)
Duration of Construction	52 months	52 months	52 months	52 months	52 months***	52 months
<b>Segment 10: New Whirlwind – Windhub 500-kV T/L</b>						
Distance of new ROW [1 s-c 500-kV T/L]	16.8 miles	16.8 miles	16.8 miles	16.8 miles	16.8 miles	16.8 miles
No. new transmission structures	96 (s-c 500-kV LSTs)	96 (s-c 500-kV LSTs)	96 (s-c 500-kV LSTs)	96 (s-c 500-kV LSTs)	96 (s-c 500-kV LSTs)	96 (s-c 500-kV LSTs)
<b>Segment 4: Whirlwind 500/220 kV T/L Elements</b>						
Distance of new ROW	19.6 miles	20.0 miles	19.6 miles	19.6 miles	19.6 miles	19.6 miles
2 s-c 220-kV T/Ls	4.0 miles (each)	4.0 miles (each)	4.0 miles (each)	4.0 miles (each)	4.0 miles (each)	4.0 miles (each)
1 s-c 500-kV T/L	15.6 miles	16.0 miles	15.6 miles	15.6 miles	15.6 miles	15.6 miles
No. new transmission structures	165	164	165	165	165	165
<b>Segment 5: Antelope – Vincent No. 2 500-kV T/L</b>						
Distance of existing ROW [1 s-c 500-kV T/L]	17.8 miles	17.8 miles	17.8 miles	17.8 miles	17.8 miles	17.8 miles
Existing T/Ls to be removed	Antelope-Vincent 220-kV; Antelope-Mesa 220-kV	Antelope-Vincent 220-kV; Antelope-Mesa 220-kV	Antelope-Vincent 220-kV; Antelope-Mesa 220-kV	Antelope-Vincent 220-kV; Antelope-Mesa 220-kV	Antelope-Vincent 220-kV; Antelope-Mesa 220-kV	Antelope-Vincent 220-kV; Antelope-Mesa 220-kV
No. new transmission structures	67 (s-c 500-kV LSTs)	67 (s-c 500-kV LSTs)	67 (s-c 500-kV LSTs)	67 (s-c 500-kV LSTs)	67 (s-c 500-kV LSTs)	67 (s-c 500-kV LSTs)
<b>Segment 11: New Mesa – Vincent (via Gould) 500/220-kV T/L</b>						
Distance of ROW [existing and expanded]	36.2 miles	36.2 miles	36.2 miles	36.2 miles	36.2 miles	36.2 miles
New 220-kV conductor on existing towers	17.5 miles	17.5 miles	17.5 miles	17.5 miles	17.5 miles	17.5 miles
1 s-c 500-kV T/L	18.7 miles	18.7 miles	18.7 miles	18.7 miles	18.7 miles	18.7 miles
Distance of expanded ROW	3.0 miles	3.0 miles	3.0 miles	3.0 miles	3.0 miles	3.0 miles
Distance of ROW on NFS lands	20.4 miles	20.4 miles	20.4 miles	20.4 miles	20.4 miles	20.4 miles
Existing T/Ls to be removed	Pardee-Vincent No.1 220-kV Eagle Rock-Pardee 220-kV	Pardee-Vincent No.1 220-kV Eagle Rock-Pardee 220-kV	Pardee-Vincent No.1 220-kV Eagle Rock-Pardee 220-kV	Pardee-Vincent No.1 220-kV Eagle Rock-Pardee 220-kV	Pardee-Vincent No.1 220-kV Eagle Rock-Pardee 220-kV	Pardee-Vincent No.1 220-kV Eagle Rock-Pardee 220-kV
No. new transmission structures (total)***	76 (s-c 500 & 220-kV LSTs s-c 220-kV TSPs)	76 (s-c 500 & 220-kV LSTs s-c 220-kV TSPs)	76(s-c 500 & 220-kV LSTs s-c 220-kV TSPs)	76 (s-c 500 & 220-kV LSTs s-c 220-kV TSPs)	76 (s-c 500 & 220-kV LSTs s-c 220-kV TSPs)	76 (s-c 500 & 220-kV LSTs s-c 220-kV TSPs)

<b>Table 1. Summary Comparison of Components of the Proposed Project and Alternatives</b>						
	<b>Alternative 2 (SCE's Proposed Project)</b>	<b>Alternative 3 (West Lancaster)</b>	<b>Alternative 4 (Chino Hills Routes)</b>	<b>Alternative 5 (Partial Underground)</b>	<b>Alternative 6 (Max. Helicopter in ANF)</b>	<b>Alternative 7 (66-kV Subtransmission)</b>
No. on NFS lands <sup>2</sup>	59 (s-c 500-kV LSTs)	59 (s-c 500-kV LSTs)	59 (s-c 500-kV LSTs)	59 (s-c 500-kV LSTs)	59 (s-c 500-kV LSTs)	59 (s-c 500-kV LSTs)
No. new transmission structures constructed by helicopter (all NFS lands)	16	16	16	16	56	16
No. of helicopter staging areas (total)	7	7	7	7	4	7
No. on NFS lands	4	4	4	4	3	4
New roads on NFS lands	1.35 miles	1.35 miles	1.35 miles	1.35 miles	0.36 miles	1.35 miles
Reconstructed roads on NFS lands	13.3 miles	13.3 miles	13.3 miles	13.3 miles	8.56 miles	13.3 miles
Maintenance roads on NFS lands	18.2 miles	18.2 miles	18.2 miles	18.2 miles	7.10 miles	18.2 miles
Private/Non-NFS roads requiring improvements	7.23 miles	7.23 miles	7.23 miles	7.23 miles	7.12 miles	7.23 miles
Total new/improved roads	40.05 miles (±15%: 34 to 46)	40.05 miles (±15%: 34 to 46)	40.05 miles (±15%: 34 to 46)	40.05 miles (±15%: 34 to 46)	23.13 miles (±15%: 20 to 27)	40.05 miles (±15%: 34 to 46)
Total new/improved roads on NFS lands	32.83 miles (±15%: 28 to 38)	32.83 miles (±15%: 28 to 38)	32.83 miles (±15%: 28 to 38)	32.83 miles (±15%: 28 to 38)	16.01 miles (±15%: 14 to 18)	32.83 miles (±15%: 28 to 38)
<b>Segment 6: Section of New Replacement Rio Hondo – Vincent No. 2 500-kV T/L (initially energized at 220 kV) and Section of New Mira Loma – Vincent 500-kV T/L</b>						
Distance of existing ROW [s-c 500-kV T/L]	26.9 miles	26.9 miles	26.9 miles	26.9 miles	26.9 miles	26.9 miles
Distance of NFS lands	21.85 miles	21.85 miles	21.85 miles	21.85 miles	21.85 miles	21.85 miles
Existing T/Ls to be removed	Rio Hondo-Vincent No. 2 220-kV; Antelope-Mesa 220-kV	Rio Hondo-Vincent No. 2 220-kV; Antelope-Mesa 220-kV	Rio Hondo-Vincent No. 2 220-kV; Antelope-Mesa 220-kV	Rio Hondo-Vincent No. 2 220-kV; Antelope-Mesa 220-kV	Rio Hondo-Vincent No. 2 220-kV; Antelope-Mesa 220-kV	Rio Hondo-Vincent No. 2 220-kV; Antelope-Mesa 220-kV
No. new transmission structures (total)	138 (s-c 500 & 220-kV LSTs s-c 500-kV TSPs)	138 (s-c 500 & 220-kV LSTs s-c 500-kV TSPs)	138 (s-c 500 & 220-kV LSTs s-c 500-kV TSPs)	138 (s-c 500 & 220-kV LSTs s-c 500-kV TSPs)	138 (s-c 500 & 220-kV LSTs s-c 500-kV TSPs)	138 (s-c 500 & 220-kV LSTs s-c 500-kV TSPs)
No. on NFS lands	105 (99 s-c 500-kV LSTs 6 s-c 500-kV TSPs)	105 (99 s-c 500-kV LSTs 6 s-c 500-kV TSPs)	105 (99 s-c 500-kV LSTs 6 s-c 500-kV TSPs)	105 (99 s-c 500-kV LSTs 6 s-c 500-kV TSPs)	105 (99 s-c 500-kV LSTs 6 s-c 500-kV TSPs)	105 (99 s-c 500-kV LSTs 6 s-c 500-kV TSPs)
No. new transmission structures constructed by helicopter (all NFS lands)	17	17	17	17	87	17

<sup>2</sup> There are a total of 68 structures on NFS lands in Segment 11; where 59 structures are new and nine (9) are existing double-circuit structures of the Eagle Rock-Mesa 220-kV T/L where new 220-kV conductor would be strung on the vacant side of these structures.

<b>Table 1. Summary Comparison of Components of the Proposed Project and Alternatives</b>						
	<b>Alternative 2 (SCE's Proposed Project)</b>	<b>Alternative 3 (West Lancaster)</b>	<b>Alternative 4 (Chino Hills Routes)</b>	<b>Alternative 5 (Partial Underground)</b>	<b>Alternative 6 (Max. Helicopter in ANF)</b>	<b>Alternative 7 (66-kV Subtransmission)</b>
No. of helicopter staging areas (total)	5	5	5	5	7	5
No. on NFS lands	4	4	4	4	7	4
New roads on NFS lands	2.85 miles	2.85 miles	2.85 miles	2.85 miles	0.30 mile	2.85 miles
Reconstructed roads on NFS lands	9.67 miles	9.67 miles	9.67 miles	9.67 miles	4.27 miles	9.67 miles
Maintenance roads on NFS lands	45.6 miles	45.6 miles	45.6 miles	45.6 miles	28.0 miles	45.6 miles
Private/Non-NFS roads requiring improvement	2.66 miles	2.66 miles	2.66 miles	2.66 miles	2.66 miles	2.66 miles
Total new/improved roads	60.79 miles (±15%: 52 to 70)	60.79 miles (±15%: 52 to 70)	60.79 miles (±15%: 52 to 70)	60.79 miles (±15%: 52 to 70)	35.22 miles (±15%: 30 to 41)	60.79 miles (±15%: 52 to 70)
Total new/improved roads on NFS lands	58.13 miles (±15%: 49 to 67)	58.13 miles (±15%: 49 to 67)	58.13 miles (±15%: 49 to 67)	58.13 miles (±15%: 49 to 67)	32.55 miles (±15%: 28 to 37)	58.13 miles (±15%: 49 to 67)
<b>Segment 7: Section of New Replacement Rio Hondo – Vincent No. 2 500-kV T/L (initially energized at 220 kV) and Section of New Mira Loma – Vincent 500-kV T/L</b>						
Distance of existing ROW [d-c 500-kV T/L]	15.8 miles	15.8 miles	15.8 miles	15.8 miles	15.8 miles	15.8 miles
Existing T/L to be removed	Antelope-Mesa 220-kV	Antelope-Mesa 220-kV	Antelope-Mesa 220-kV	Antelope-Mesa 220-kV	Antelope-Mesa 220-kV	Antelope-Mesa 220-kV
No. new transmission structures	85 (d-c 500-kV LSTs/TSPs s-c 500-kV LSTs d-c 220-kV LST)	85 (d-c 500-kV LSTs/TSPs s-c 500-kV LSTs d-c 220-kV LST)	85 (d-c 500-kV LSTs/TSPs s-c 500-kV LSTs d-c 220-kV LST)	85 (d-c 500-kV LSTs/TSPs s-c 500-kV LSTs d-c 220-kV LST)	85 (d-c 500-kV LSTs/TSPs s-c 500-kV LSTs d-c 220-kV LST)	85 (d-c 500-kV LSTs/TSPs s-c 500-kV LSTs d-c 220-kV LST)
No. new subtransmission structures	150 (d-c 66-kV LWSPs and TSPs)	150 (d-c 66-kV LWSPs and TSPs)	150 (d-c 66-kV LWSPs and TSPs)	150 (d-c 66-kV LWSPs and TSPs)	150 (d-c 66-kV LWSPs and TSPs)	128 (d-c 66-kV LWSPs and TSPs)
<b>Segment 8: Section of New Mira Loma – Vincent 500-kV T/L</b>						
Distance of ROW [existing and expanded/new]						
Segment 8A/8C [d-c 500-kV T/L]	33.0 miles	33.0 miles	<b>Route A: 23.2 miles Route B: 26.7 miles Route C: 22.7 miles Route D: 26.8 miles</b>	33.0 miles	33.0 miles	33.0 miles
Segment 8B [d-c 220-kV T/L]	6.8 miles	6.8 miles	None	6.8 miles	6.8 miles	6.8 miles
Distance of expanded/new ROW	4.4 miles	4.4 miles	<b>Route A: 10.15 miles Route B: 13.65 miles Route C: 13.25 miles Route D: 13.75 miles</b>	4.4 miles	4.4 miles	4.6 miles

<b>Table 1. Summary Comparison of Components of the Proposed Project and Alternatives</b>						
	<b>Alternative 2 (SCE's Proposed Project)</b>	<b>Alternative 3 (West Lancaster)</b>	<b>Alternative 4 (Chino Hills Routes)</b>	<b>Alternative 5 (Partial Underground)</b>	<b>Alternative 6 (Max. Helicopter in ANF)</b>	<b>Alternative 7 (66-kV Subtransmission)</b>
Distance of underground 500-kV T/L	None	None	None	3.5 miles	None	None
Existing T/Ls to be removed	Various 220-kV T/L structures	Various 220-kV T/L structures	Various 220-kV T/L structures	Various 220-kV T/L structures	Various 220-kV T/L structures	Various 220-kV T/L structures
No. new transmission structures	226 (d-c 500-kV LSTs/TSPs d-c 220-kV LST/TSPs s-c 500-kV LSTs/TSPs s-c 220-kV LST/TSPs 220-kV 3-pole dead-end)	226 (d-c 500-kV LSTs/TSPs d-c 220-kV LST/TSPs s-c 500-kV LSTs/TSPs s-c 220-kV LST/TSPs 220-kV 3-pole dead-end)	<b>Route A:</b> 135 <b>Route B:</b> 154 <b>Route C:</b> 175 <b>Route D:</b> 164 (d-c 500-kV LSTs/TSPs d-c 220-kV LST/TSPs s-c 500-kV LSTs/TSPs s-c 220-kV LST/TSPs 220-kV 3-pole dead-end) All require a new switching station	211 (d-c 500-kV LSTs/TSPs d-c 220-kV LST/TSPs s-c 500-kV LSTs/TSPs s-c 220-kV LST/TSPs 220-kV 3-pole dead-end) 2 transition stations	226 (d-c 500-kV LSTs/TSPs d-c 220-kV LST/TSPs s-c 500-kV LSTs/TSPs s-c 220-kV LST/TSPs 220-kV 3-pole dead-end)	226 (d-c 500-kV LSTs/TSPs d-c 220-kV LST/TSPs s-c 500-kV LSTs/TSPs s-c 220-kV LST/TSPs 220-kV 3-pole dead-end)
No. new subtransmission structures	55 (d-c 66-kV LWSPs)	55 (d-c 66-kV LWSPs)	None	55 (d-c 66-kV LWSPs)	55 (d-c 66-kV LWSPs)	45 (d-c 66-kV LWSPs)
Components within CHSP	None	None	<b>Route A:</b> 2.3-mile T/L; 4- to 5-acre switching station; 8 to 10 500-kV double-circuit structures <b>Route B:</b> 4.9-mile T/L; 18 to 21 500-kV double-circuit structures <b>Route C:</b> 3.1-mile T/L; 25 single-circuit 500-kV structures and 5 to 7 double-circuit 220-kV structures; Remove 25 existing 220/500-kV structures <b>Route D:</b> 1.4-mile T/L; 5 to 8 500-kV structures	None	None	None
<b>Segment 9: Substation Facilities</b>						
New Whirlwind Substation						
Total temporary disturbance	65 acres	65 acres	65 acres	65 acres	65 acres	65 acres
Total acres to be restored	None	None	None	None	None	None
Total permanent disturbance	65 acres	65 acres	65 acres	65 acres	65 acres	65 acres

**Table 1. Summary Comparison of Components of the Proposed Project and Alternatives**

	Alternative 2 (SCE's Proposed Project)	Alternative 3 (West Lancaster)	Alternative 4 (Chino Hills Routes)	Alternative 5 (Partial Underground)	Alternative 6 (Max. Helicopter in ANF)	Alternative 7 (66-kV Subtransmission)
Substation Modifications						
Antelope Substation	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment
Vincent Substation	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment	Expand/upgrade for new 500-kV & 220-kV equipment
Mesa Substation	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment
Gould Substation	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment	Upgrade to accommodate new 220-kV equipment
Mira Loma Substation	Upgrade to accommodate new 500-kV equipment	Upgrade to accommodate new 500-kV equipment	No upgrades	Upgrade to accommodate new 500-kV equipment	Upgrade to accommodate new 500-kV equipment	Upgrade to accommodate new 500-kV equipment

Note: s-c: single-circuit; d-c: double-circuit

Information provided here is based on SCE's preliminary design for the TRTP and is subject to change during final engineering. For land disturbance numbers, a deviation factor of ±15 percent has been incorporated to provide a range allowing for the error associated with a project that has only gone through preliminary engineering

\* Land disturbance under Alternative 3 would decrease by a factor of one structure within Segment 4. As such, the acres disturbed would continue to be almost identical to Alternative 2.

\*\* Alternative 7 would have some additional temporary disturbance associated with underground construction of the 66-kV subtransmission lines in Segment 7 through the Duck Farm Project area and due to the overhead re-routing the 66-kV line in the Whittier Narrows Recreation area in Segments 7 and 8A. New access and spur roads may also be required for the new approximately 1,200 foot ROW for the San Gabriel River crossing within Segment 8A associated with the Whittier Narrows Overhead Re-Route.

\*\*\* Construction of Alternative 6 would be identical to Alternative 2, with the exception of Segments 6 and 11, where substantially more helicopter construction may result in a longer construction schedule due to the limited availability of specialized helicopters and personnel. The schedule for helicopter construction would be finalized as part of final design and pre-construction planning.

- Local repository sites were established where documents and project information can be reviewed by the public. The NOP, Public Scoping Report, the Draft EIR/EIS, and all future Project-related documents are available for review at the information repository sites.

## 1.5 Areas of Controversy and Issues to be Resolved

The State CEQA Guidelines (§15123) require that the summary of an EIR identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public, and issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.

- Controversy emerged during the scoping process regarding Segment 8A in the City of Chino Hills. Local residents and City officials are opposed to the construction of a 500-kV double-circuit transmission line through the residential areas of the City. In Chino Hills, the proposed 500-kV line would replace an existing 220-kV line that is currently de-energized. Concerns expressed about this portion of Segment 8a include adverse visual impacts on the community, exposure of nearby residents to electric and magnetic fields (EMF), public safety concerns, and potential adverse effects on local property values.
- The California Department of Parks and Recreation (CDPR) has expressed opposition to alternative routes proposed by the City of Chino Hills that would route the transmission line through portions of Chino Hills State Park in order avoid feasible transmission upgrades in residential areas of the City. The CDPR had indicated that any transmission improvements within Chino Hills State Park would be inconsistent with the Park's General Plan and, therefore, would not be permitted absent amendments to the General Plan.
- The Watershed Conservation Authority (WCA) has approved a recreation, water quality, and habitat restoration project known as the River Commons within the ROW for Segment 7 adjacent to the San Gabriel River. The WCA is concerned that the replacement and relocation of transmission towers across the River Commons site will adversely affect its plans for construction of the River Commons project and may require modification of project site plans to accommodate the proposed Segment 7 improvements.
- Concern was expressed at scoping meetings about the potential adverse effects of Segment 8A on the native habitat and wildlife corridor that has been established along the crest of the Puente Hills. Expressed concerns include the potential for adverse effects related to native habitat, wildlife movement, recreational trail use, and visual resources. These concerns were expressed by local residents and the Puente Hills Landfill Native Habitat Preservation Authority.

## 1.6 Purpose and Need

Under the Council on Environmental Quality (CEQ) regulations for NEPA (40 CFR Section 1502.13), an EIS must identify the underlying purpose and need to which the Lead Agency is responding in proposing the alternatives, including the proposed action. Similarly, an EIR must contain a clearly written statement of objectives that include the underlying purpose of the project (State CEQA Guidelines §15124(b)).

The purpose of the proposed TRTP is described in the Proponent's Environmental Assessment (PEA) submitted as part of SCE's application to the CPUC (CEQA Lead Agency) and the USDA Forest Service (NEPA Lead Agency). As stated by the Applicant, the purpose of the proposed TRTP is to provide the electrical facilities necessary to integrate levels of new wind generation in excess of 700 MW and up to approximately 4,500 MW in the TWRA (SCE, 2007).

In addition to the purpose of the Project described above, SCE identified the following objectives for the Project in the PEA:

- Construct the project to reliably interconnect new wind generation resources in the TWRA, and enable SCE and other California utilities to comply with California's Renewables Portfolio Standard (RPS) in an expedited manner.
- Comply with all applicable reliability planning criteria required by the North American Electric Reliability Council (NERC), Western Electricity Coordinating Council (WECC), and the CAISO.



- Construct facilities in an orderly, rational and cost-effective manner to maintain reliable electric service, by minimizing service interruptions, during construction.
- Address the reliability needs of the CAISO controlled grid due to projected load growth in the Antelope Valley.
- Address the South of Lugo transmission constraints, an ongoing source of concern for the Los Angeles Basin.
- Maximize the use of existing T/L right-of-ways in order to minimize effects on previously undisturbed land and resources.
- Minimize environmental impacts, through selection of routes, tower types and locations, while still meeting project objectives.
- Where existing right-of-way is not available, select the shortest feasible route that minimizes environmental impacts.
- Meet project needs in a cost-effective and timely manner.

The CPUC and Forest Service reviewed the Project objectives presented by SCE to determine which of the objectives represented an underlying purpose of the Project and, therefore, could appropriately be used to develop a range of reasonable alternatives to the Project for the EIR/EIS. In addition to the purpose of the Project described by SCE to provide electrical facilities needed to integrate new wind generation, the Lead Agencies determined that the Project would also accomplish two other important objectives related to increasing transmission system reliability in the Antelope Valley and resolving transmission constraints south of Lugo Substation, which is located in Hesperia, California. Therefore, for the purposes of CEQA and NEPA, the Project's three primary objectives are to:

- Provide the electrical facilities necessary to reliably interconnect and integrate in excess of 700 MW<sup>3</sup> and up to approximately 4,500 MW of new wind generation in the TWRA currently being planned or expected in the future, thereby enabling SCE and other California utilities to comply with the California RPS goals in an expedited manner (i.e., 20 percent renewable energy by year 2010 per California Senate Bill 107).<sup>4</sup>
- Address the reliability needs of the CAISO-controlled grid due to projected load growth in the Antelope Valley.
- Address the South of Lugo transmission constraints, an ongoing source of concern for the Los Angeles Basin.

The Lead Agencies determined that the other objectives identified by SCE in the PEA were intended to guide the planning and design of the TRTP and did not represent part of the underlying purpose of the Project.

The Lead Agencies decided it was necessary to assess the purpose and need for the TRTP independent of SCE's application filings (Bagley, 2008). Relevant documents issued by the CAISO, California Energy Commission (CEC), and Federal Energy Regulatory Commission (FERC) were reviewed to assess whether sufficient documentation exists to support the need for the TRTP. Based upon the information contained in these documents, it was determined that there is ample support to justify the need for the TRTP. It was determined that a high probability exists that sufficient generation will be sited in the TWRA to justify the network upgrades proposed. The TRTP is expected to provide both the capacity to connect the resources listed in the Tehachapi Generation Queue (at least those listed between August 2003 through April 2006 – 19 total projects equaling 4,350 MW) as well as provide additional system reliability

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<sup>3</sup> The Antelope Transmission Project, which provides 700 MW of transmission capacity, is comprised of three segments: Segment 1 or the Antelope-Pardee 500-kV Transmission Project (SCH No. 2005061161) and the Antelope Transmission Project, Segments 2 & 3 (SCH No. 2006041160) were previously analyzed and approved by the CPUC and Forest Service (Segment 1 only).

<sup>4</sup> FERC Order No. 2003 requires all public utilities that own, control, or operate facilities for transmitting electric energy in interstate commerce to provide interconnection service to electric generating facilities having a capacity of more than 20 megawatts.

to the CAISO-controlled grid. Furthermore, FERC's approval of the CAISO's proposed process of aggregating the interconnection requests of the projects in the Tehachapi Generation Queue for the purpose of establishing the necessary network system upgrades to accommodate all projects in the queue (19 in total) lends regulatory support for development of the TRTP. Finally, it was determined that the TRTP will help alleviate concerns that have been raised by the CEC that the present transmission infrastructure is insufficient to permit utilities to meet their RPS requirements. It was independently concluded by the Lead Agencies that the TRTP would help to address several concerns presently facing California's electric industry including the following needs: (1) expand California's existing transmission infrastructure; (2) accommodate large quantities of renewable generation in order to meet the State's RPS goals; and (3) enhance system reliability in the Los Angeles area. As such, the purpose and need for the TRTP, as defined above by the Lead Agencies, has been confirmed independent of SCE's application filings.

### **California Public Utilities Commission**

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of Investor-Owned Utilities (IOUs) operating within California, including the Project proponent. The CPUC is the Lead Agency for CEQA compliance in evaluation of SCE's proposed Project. In accordance with CEQA requirements, the CPUC's purpose in evaluating the EIR/EIS is to determine the adequacy of the document according to CEQA and to provide certification of CEQA compliance if it is determined that the EIR/EIS satisfies all CEQA requirements.

After the evaluation and certification of the EIR/EIS, the CPUC will also respond to SCE's application for a Certificate of Public Convenience and Necessity (CPCN, Application A.07-06-031), as filed on June 29, 2007. Prior to taking action to approve SCE's CPCN application, the CPUC must determine that the proposed Project is consistent with the CPUC's purpose and objectives for granting CPCNs, including, where applicable, compliance with CPUC General Order 131-D. This order states that no electric public utility shall construct electric transmission line facilities designed for operation at 200 kV or more without the CPUC having first found that the facilities are necessary "to promote the safety, health, comfort, and convenience of the public, and that they are required by the public convenience and necessity." In addition, the CPUC seeks to facilitate the achievement of the State of California's goals for the distribution of renewable energy generated by IOUs in California. As a crucial step in fulfilling this purpose, the CPUC must explore possibilities for the removal of constraints on the transmission of electricity from its point of generation to its point of use, such as would be facilitated by the proposed Project. In connection with this purpose, the CPUC must also attempt to further the implementation of other State policies and programs related to power generation and transmission.

### **USDA Forest Service**

As the lead federal agency, the USDA Forest Service has identified the following agency specific purposes (objectives) in analyzing the proposed project and alternatives. This agency-specific definition better identifies the context in which the agency may authorize this type of project.

- Minimize adverse environmental effects to NFS lands, such as impacts to the following resources: visual, biological, cultural, recreation, air, soil, and water, among others as applicable.
- Minimize the effects of urbanization, or negative effects to open space and natural settings, on the Angeles National Forest.
- Ensure that future Forest management activities such as wildland fire fighting, among others, are not detrimentally affected by the location and/or design of the proposed action.

- Ensure that the location of the transmission line on NFS lands maximizes the accommodation of future utility needs.

Pursuant to the Federal Land Policy and Management Act (FLPMA) of 1976 (as amended), the Forest Service's need for action is to respond to applications from SCE for a Special Use authorization to construct, maintain, and use transmission lines (and ancillary improvements) through the ANF. The Forest Service will consider the application for use of NFS lands to ensure that the proposed action is in the public interest and is appropriate based on the governing land management plan. In addition, in compliance with Executive Order 13212, which is described above in Section 1.1 (Background), the USDA Forest Service will work in coordination with the CPUC and SCE to assess the proposed Project in an expeditious manner, to the maximum extent feasible without jeopardizing the integrity of this analysis, thereby ensuring that transmission needs are met with minimal environmental impacts.