

**1.1 OVERVIEW**

Southern California Edison Company (SCE) is proposing to construct a new, 25.6-mile-long 500 kilovolt (kV) transmission line (T/L) between SCE's existing 220 kV Antelope and Pardee substations in Los Angeles County, California (refer to Figure 1-1). The proposed 500 kV T/L would replace an existing 66 kV line that runs over the majority of the proposed route between the Antelope and Pardee substations, including approximately 13 miles within the Angeles National Forest. The proposed 500 kV T/L route traverses an area of residential development in the Santa Clarita Valley area to the north and east of the existing Pardee Substation.

The 500 kV T/L would be energized initially at 220 kV. The proposed project would include electrical interconnections at the existing Antelope and Pardee substations as well as an initial expansion of the Antelope Substation and relocation of several existing 66 kV subtransmission lines in the vicinity of the Antelope Substation (collectively, referred to as the Antelope-Pardee 500 kV T/L Project). The proposed project also includes the acquisition and fencing of approximately 31 acres of land necessary for the upgrade of the Antelope Substation from 220 kV to 500 kV. The proposed Antelope-Pardee 500 kV T/L Project is also referred to as Segment 1.

The proposed Antelope Transmission Project includes Segment 1 and also includes Segment 2 (Antelope-Vincent, 500 kV T/L) and Segment 3 (Antelope-Substation One, 500 kV T/L) and Substation One to Substation Two, 220 kV T/L). Segments 2 and 3 are addressed in a separate Certificate of Public Convenience and Necessity (CPCN) Application and Proponent's Environmental Assessment (PEA) as required by the California Public Utilities Commission (CPUC).

**1.2 PURPOSE AND NEED**

This project is a part of SCE's Method of Service (MOS) to interconnect and integrate potential alternative energy projects to SCE's electrical system. The proposed Antelope to Pardee 500kV T/L would be energized initially at 220 kV and would interconnect and integrate the generation from a proposed 201 megawatt (MW) wind project located 8.5 miles northwest of the Antelope Substation. SCE's obligation to interconnect and integrate the proposed 201 MW facility arises 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 California Independent System Operator's (CAISO) Tariff. Although the T/L would be operated initially at 220 kV, the CAISO-approved interconnection, using 500 kV design and construction standards, would help accommodate up to 4400 MW of potential proposed wind generation located north of

Antelope and avoid the need to construct, tear down and replace multiple 220 kV facilities with 500 kV facilities in the future.

The purpose for making applications for the Antelope Transmission Project, Segments 1, 2 and 3 is premised upon Ordering Paragraph No. 8 of Decision 04-06-010, which required SCE to “file an application seeking a certificate authorizing construction of the first phase of Tehachapi transmission upgrades consistent with its 2002 conceptual study and the study group’s recommendation within six months of the effective date of this order...” That order was premised on Finding of Fact No. 18, which found that the “magnitude and concentration” of renewable resources identified in the California Energy Commission's (CEC) Renewable Resources Report justified a “first phase of Tehachapi transmission upgrades” to facilitate achievement of goals required by Public Utilities Code Section 399.14. In addition, in Docket I. 00-11-001, an Assigned Commissioner Ruling required SCE to file two separate applications (one CPCN application for Segment 1 and one CPCN application for Segments 2 and 3). *See Assigned Commissioner Ruling Regarding Tehachapi CPCN Filing Requirement* (October 21, 2004).

Based on SCE’s obligation to interconnect and integrate 201 MW from the proposed generation project northwest of Antelope into its electric system, SCE has determined that certain T/L and substation facilities are required to be constructed in and between the Antelope and Pardee substations. The existing transmission path from Antelope, located in the Lancaster area, to Vincent is fully loaded at this time.

Segment 1 consisting of a new 500 kV T/L, operated initially at 220 kV, and new 220 kV line positions at the Antelope and Pardee substations, would prevent overloading of the existing facilities. Segment 1 would increase the transfer capability south of the Antelope Substation and allow the 201 MW to be safely transferred to serve system load. The upgrades would also increase that transfer capability so as to accommodate more than the 201 MW in anticipation of additional generation north of the Antelope Substation.

### **1.3 SCOPE OF PROPONENT’S ENVIRONMENTAL ASSESSMENT**

This PEA evaluates potential environmental impacts that could result from construction and operation of the proposed project, including demolition and removal of the existing 66 kV facilities that are present along the majority of the proposed 500 kV T/L route, and approximately 5 miles of single circuit 500 kV towers between Haskell Canyon and the Pardee Substation. The primary potential project impacts are the following:

- Visual impacts from overhead 500 kV T/L towers and conductors and expansion of Antelope Substation

- Impacts to biological resources including sensitive species and habitats
- Impacts to cultural resources, which include archaeological, historic, and paleontological resources
- Temporary construction impacts (soil disturbance and erosion, water quality, hazards and hazardous materials, air quality, noise, traffic, and solid waste disposal) associated with access road upgrades and T/L and substation construction activities, including demolition and removal, and relocation of 66 kV and 500 kV facilities and construction of new, overhead 500 kV T/L facilities

With implementation of the inherent project design and applicant-proposed mitigation measures presented in Section 5.0, all of these potential project impacts would be less than significant.

SCE performed a siting and alternatives analysis before selecting the preferred project. The key criteria in the analysis included: 1) maximize use of existing, previously disturbed T/L right-of-way (R-O-W) to minimize effects on previously undisturbed land and resources; 2) select route and tower locations with the lowest potential for environmental impacts while maintaining the ability to meet project objectives; 3) select shortest route that is capable of meeting project objectives in order to minimize environmental impacts and project costs and associated costs to ratepayers. This PEA also considers a route alternative (Alternative 1) that would involve new 500 kV T/L construction paralleling an existing Los Angeles Department of Water and Power (LADWP) T/L corridor over the majority of the length of Alternative 1 (refer to Figure 1-1).

This PEA also considers the following alternatives in Section 3.7:

- No Project Alternative
- Non-Forest Service Land Alternative
- Underground Alternative
- Tower, Conductor, and Voltage Options

Based on the assessments presented in this PEA, the proposed Segment 1 – Antelope to Pardee 500 kV T/L route is considered to be the Preferred Alternative for the following reasons: 1) construction and operation would not result in any identified unavoidable adverse significant impacts; 2) the proposed route would maximize use of existing SCE R-O-W (inside and outside of the Angeles National Forest), including access and tower pad locations compared to the Alternative 1 route; 3) the proposed route is shorter (by 2.3 miles) than the corresponding portion of the Alternative 1 route and would avoid the communities of Green

Valley and Leona Valley; 4) the preferred project with use of double-circuit 500 kV towers between Haskell Canyon and the Pardee Substation would maintain a vacant R-O-W position (versus use of single-circuit 500 kV towers under Alternative 2), thereby not compromising any future need to utilize the R-O-W for transmission system upgrades. Since the proposed project would involve the use of existing substations (i.e., Antelope and Pardee substations), no substation alternatives have been considered.

SCE also considered other alternatives that were determined to be infeasible as discussed in Section 3.7.5. These include the underground alternative and the non-forest (Angeles National Forest) route alternative.

As required by CPUC guidelines, the California Environmental Quality Act (CEQA) Initial Study Checklist was used as a general guideline for describing potential impacts and a completed CEQA Initial Study Checklist is presented in Appendix A of this PEA. More detailed environmental assessments are presented in Sections 4.0 (Environmental Setting) and 5.0 (Environmental Impacts and Mitigation). A substantial portion of the proposed (and Alternative 1) 500 kV T/L route traverses the Angeles National Forest. In addition to the CPUC, the USDA, Forest Service (USFS) would need to evaluate and approve the proposed project. Accordingly, this PEA addresses the topics of Socioeconomics/Environmental Justice to facilitate the anticipated need for USFS compliance with the National Environmental Policy Act (NEPA) (i.e., in addition to the CPUC's need to ensure compliance with CEQA). The CPUC, as Lead Agency for CEQA compliance, would review and consider the information in this PEA and would have responsibility for overseeing preparation of an Environmental Impact Report (EIR), including associated public review. SCE anticipates that the CPUC and USFS may decide to prepare a joint environmental document (e.g., EIR/Environmental Assessment or EIR/Environmental Impact Statement) to facilitate efficient and coordinated state and federal environmental review of the proposed project.

#### **1.4 ORGANIZATION OF PEA**

The balance of this PEA is organized as follows:

- 2.0 Purpose and Need
- 3.0 Description of the Proposed Project
- 4.0 Environmental Setting
- 5.0 Environmental Impacts and Mitigation
- 6.0 Significant Environmental Impacts and Comparison of Alternatives

- 7.0 Cumulative Impacts
- 8.0 Growth-Inducing Impacts
- 9.0 Indirect Effects
- 10.0 References
- 11.0 List of Preparers
- 12.0 List of Acronyms
- Appendices:
  - Appendix A CEQA Environmental Checklist
  - Appendix B SCE Public Information Program
  - Appendix C SCE Agency Communications
  - Appendix D Biological Resources
  - Appendix E Cultural Resources Technical Report
  - Appendix F Native American Consultation
  - Appendix G Property Owner List
  - Appendix H Road Story Aerials (separate volume)
  - Appendix I Fire Prevention and Response Plan
  - Appendix J Spur Road Restoration Plan