

**6.1 SIGNIFICANT OR POTENTIALLY SIGNIFICANT ENVIRONMENTAL
IMPACTS****6.1.1 Background**

This PEA for Segments 2 and 3 of Southern California Edison’s proposed Antelope Transmission Project supersedes the PEA that was submitted to the California Public Utilities Commission on December 9, 2004 (Application No. 04-12-008). This PEA has been revised and updated to reflect: 1) more detailed engineering information; 2) transmission line route revisions (including revisions to affected maps and route mileposts) based on input received from the public and private developers; and 3) more current environmental data that became available since the PEA was originally submitted in December 2004. The key revisions to the PEA compared to the original filing are:

- Revisions to the routing of the proposed Segment 2 (Antelope to Vincent) and Segment 3 (Antelope to Substations One and Two) transmission line routes to minimize potential conflicts with pending or envisioned potential future developments.
- Addition of two alternative transmission line routes (AV1 and AV2) to Segment 2 (Antelope to Vincent).
- Selection of previous Segment 3 (Antelope to Substations One and Two) Alternative A and C routes as the proposed route (i.e., previous proposed route is now Alternative A and C as well).
- Minor realignments of the proposed and alternative Segment 3 (Antelope to Substations One and Two) 500 kV and 220 kV transmission line routes.
- Refinement of the proposed layouts for Segment 3 Substations One and Two.
- Addition of construction-related details in the Project Description (e.g., in Section 3.9, Project Construction).
- Addition of visual simulations for proposed Segment 3 transmission line and substation facilities.
- Refinement and updating of the environmental setting (Section 4.0) and environmental impacts and mitigation (Section 5.0) sections for applicable disciplines based on refined project description information and newly available baseline data as well as consideration of California Public Utilities Commission data requests on the PEA submitted in December 2004 for Segment 1 of the Antelope Transmission Project.
- Addition of new appendices.

An overview of the current proposal and associated impact findings follows.

6.1.2 Current Proposal

As discussed in Section 5.0, the proposed project, which includes the Segment 2 500 kV T/L facilities and modifications to existing SCE substation facilities, and Segment 3 which includes the proposed 500 kV T/L between Antelope Substation and Substation One, the Substation One to Substation Two 220 kV T/L, and Substation One and Substation Two, would have several potentially significant impacts. Construction and operation of the proposed project has the potential to result in significant impacts pertaining to the resource categories of Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Public Services and Utilities, Recreation, and Traffic and Transportation. However, with implementation of the applicant-proposed mitigation measures (APMs) outlined in this PEA, these potential impacts would be mitigated to less than significant levels under CEQA.

Overall, there would be no expected adverse impacts to the resource categories of Agriculture, Land Use, Mineral Resources, and Population and Housing for either Segment 2 or Segment 3.

6.2 COMPARISON OF ALTERNATIVES

The comparison of alternatives for Segment 2 and Segment 3 of the Antelope Transmission Project is addressed under separate headings in this section. Please refer to Table 6-1 and Table 6-2, respectively, for determinations of significance levels for Segments 2 and 3. Table 6-1 (Summary of Impacts and Comparison of Alternatives – Segment 2) provides comparisons for the proposed route and Alternatives AV1 and AV2 under Aesthetics; for all other resource topics, the findings are generally the same for the proposed route and Alternatives AV1 and AV2 (i.e., no comparison provided in Table 6-1).

SCE also considered the No Project Alternative and four underground technologies for 500 kV and 220 kV T/Ls as construction alternatives. The No Project and Underground alternatives were determined to be infeasible, as described in Section 3.11.

6.2.1 Summary of Purpose and Need

The proposed Segment 2 and Segment 3 project components would satisfy the project objectives of implementing SCE's Method of Service (MOS) to interconnect and integrate several potential independent energy producers' alternative energy projects to SCE's electrical system. The two segments would interconnect and integrate additional generation from several potential generators that would be located in the region north of Antelope

TABLE 6-1
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES
SEGMENT 2¹

Environmental Factor	Antelope Substation Site	Vincent Substation Site	Proposed Antelope to Vincent 500 kV T/L
Aesthetics	Short-term construction activities, and incremental changes associated with facilities expansion beyond the existing substation perimeter, are considered Less than Significant.	No Adverse Impact. Minor facilities changes to occur within the confines of the existing substation.	<p>Short-term construction activities are considered Less than Significant. Incremental visual changes due to presence of a new T/L within the sparsely-populated area between MP 0.0 and 7.6, and MP 15.0 and 21.5, considered a Less than Significant Impact. Natural contours and distance from the future residential units within the Ritter Ranch development would reduce adverse visual impacts associated with this portion of the T/L to Less than Significant. The incremental visual impact along the existing T/L corridor would be Less than Significant.</p> <p><u>Alternative AV1</u></p> <p>Short-term construction activities are considered Less than Significant. Incremental visual changes due to presence of a new T/L within the R-O-W of an existing T/L corridor in a sparsely populated area between proposed route MP 5.7 and 7.65 are considered a Less than Significant Impact.</p> <p><u>Alternative AV2</u></p> <p>Short-term construction activities are considered Less than Significant. Incremental Less than Significant changes due to presence of a new T/L within, and/or parallel to, an existing T/L corridor within the Ritter Ranch and Anaverde specific plan areas would occur at the time the residential projects are complete.</p>

**TABLE 6-1 (CONTINUED)
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES
SEGMENT 2¹**

Environmental Factor	Antelope Substation Site	Vincent Substation Site	Proposed Antelope to Vincent 500 kV T/L
Agricultural Resources	No Adverse Impact. No farmland present.	No Adverse Impact. No farmland present.	Temporary and intermittent impairment to agricultural and grazing activities is Less than Significant. Minimal amount of land conversion in a regional context is Less than Significant.
Air Quality	Less than Significant. Mitigation measures presented in Section 5.4 would be implemented to minimize equipment emissions and fugitive dust.	Less than Significant. Mitigation measures presented in Section 5.4 would be implemented to minimize equipment emissions and fugitive dust.	Less than Significant. Mitigation measures presented in Section 5.4 would be implemented to minimize equipment emissions and fugitive dust.
Biological Resources	No Adverse Impact. No sensitive biological resources.	No Adverse Impact. No sensitive biological resources.	Less than Significant through implementation of the mitigation measures presented in Section 5.5.
Cultural Resources	No Adverse Impact. No sensitive Cultural Resources.	No Adverse Impact. No sensitive Cultural Resources.	Less than Significant through implementation of the mitigation measures presented in Section 5.6.
Geological Resources	Less than Significant through the implementation of the mitigation measures presented in Section 5.7.	Less than Significant through the implementation of the mitigation measures presented in Section 5.7.	Less than Significant through the implementation of the mitigation measures presented in Section 5.7.
Hazards and Hazardous Materials	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP and through development and implementation of other plans and programs required under State and federal laws.
Hydrology and Water Quality	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.

TABLE 6-1 (CONTINUED)
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES
SEGMENT 2¹

Environmental Factor	Antelope Substation Site	Vincent Substation Site	Proposed Antelope to Vincent 500 kV T/L
Land Use and Planning	Less than Significant pertaining to existing land uses and future planning by the City of Lancaster.	Less than Significant pertaining to existing land uses and future planning by the County of Los Angeles.	Less than Significant pertaining to existing land uses and future planning by the City of Lancaster, the City of Palmdale, and the County of Los Angeles.
Mineral Resources	No Adverse Impact. No recoverable mineral resources present.	No Adverse Impact. No recoverable mineral resources present.	Less than Significant because the project would not limit the availability of mineral resources within a State or local jurisdiction.
Noise	Less than Significant through implementation of the mitigation measures presented in Section 5.12.	Less than Significant through implementation of the mitigation measures presented in Section 5.12.	Less than Significant through implementation of the mitigation measures presented in Section 5.12.
Population and Housing	No Adverse Impact. Population and housing would not be affected.	No Adverse Impact. Population and housing would not be affected.	No Adverse Impact. Population and housing would not be affected.
Public Services and Utilities	Less than Significant through implementation of the mitigation measures presented in Section 5.14.	Less than Significant through implementation of the mitigation measures presented in Section 5.14.	Less than Significant through implementation of the mitigation measures presented in Section 5.14.
Recreation	No Adverse Impact pertaining to recreational uses in the City of Lancaster.	No Adverse Impact pertaining to recreational uses in the County of Los Angeles.	No Adverse Impacts pertaining to recreational uses in the City of Lancaster, City of Palmdale, and the County of Los Angeles.
Traffic and Transportation	Less than Significant. Short-term impacts pertaining to disruption of traffic and transportation through implementation of mitigation measures presented in Section 5.16.	Less than Significant. Short-term impacts pertaining to disruption of traffic and transportation through implementation of mitigation measures presented in Section 5.16.	Less than Significant. Short-term impacts pertaining to disruption of traffic and transportation through implementation of mitigation measures presented in Section 5.16.

¹ Refer to Figures 3-2 for locations of proposed facilities and Section 3.0 for details.

TABLE 6-2
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES
SEGMENT 3¹

Environmental Factor	Antelope Substation Site	Proposed 500 kV T/L Antelope - Substation One	Alternative A 500 kV T/L	Alternative B 500 kV T/L	Proposed Substation One to Substation Two 220 kV T/L	Alternative C 220 kV T/L	Proposed Substation One Site	Alternative Substation 1A Site	Alternative Substation 1B Site	Alternative Substation 1C Site	Proposed Substation Two Site	Alternative Substation 2A Site	Alternative Substation 2B Site
Aesthetics	Short-term construction activities, and incremental changes associated with facilities expansion beyond the existing substation perimeter, are considered Less than Significant.	Short-term construction activities are considered Less than Significant. Visual presence of a new T/L between MP 0.0 and 2.1 is Less than Significant. Potential impact to visual environment identified adjacent to proposed Del Sur Ranch development. Impact to visual environment from presence of a new T/L between MP 2.1 and 25.6 is Less than Significant.	Short-term construction activities are considered Less than Significant. Visual presence of a new T/L between MP 0.0 and 2.1 is Less than Significant. Potential impact to visual environment identified adjacent to proposed Del Sur Ranch development. Impact to visual environment from presence of a new T/L between MP 2.1 and 25.9 is Less than Significant.	Short-term construction activities are considered Less than Significant. Visual presence of a new T/L between MP 0.0 and 10.3 is Less than Significant. Potential impact to visual environment identified on the east side of the proposed Copa de Oro Estate Development. Impact to visual environment from presence of a new T/L between MP 10.3 and 26.04 is Less than Significant.	Short-term construction activities are considered Less than Significant. Incremental visual changes due to presence of a new T/L adjacent to an existing T/L between MP 27.3 and 35.2 is Less than Significant.	Short-term construction activities are considered Less than Significant. Visual presence of a new T/L between MP 0.0 and 9.5 is considered adverse but Less than Significant.	Short-term construction activities are considered Less than Significant. Visual impact of new facility is Less than Significant due to general industrial context of the adjacent area. (Cal Cement facility).	Short-term construction activities are considered Less than Significant. Visual impact of new facility is Less than Significant due to general industrial context of the adjacent area. (Cal Cement facility).	Short-term construction activities are considered Less than Significant. Visual impact of new facility is Less than Significant due to general industrial context of the adjacent area. (Cal Cement facility).	Short-term construction activities are considered Less than Significant. Potential Significant visual impact due to presence of Pacific Crest National Scenic Trail within this alternative substation site.	Short-term construction activities are considered Less than Significant. Visual impact of new facility is Less than Significant due to low visual mass and industrial context of the adjacent area.	Short-term construction activities are considered Less than Significant. Visual impact of new facility is Less than Significant due to low visual mass and industrial context of the adjacent area.	Short-term construction activities are considered Less than Significant. Visual impact of new facility is Less than Significant due to low visual mass and industrial context of the adjacent area. Less than Significant impact to visual environment associated with required 220 kV T/L crossing of State Route 58 to connect to this alternate substation site.
Agricultural Resources	No adverse impacts. No farmland present.	Temporary and intermittent construction impairment to agricultural and grazing activities is less than significant. Minimal amount of farmland conversion in a regional context is less than significant.	Temporary and intermittent construction impairment to agricultural and grazing activities is less than significant. Minimal amount of farmland conversion in a regional context is less than significant.	Temporary and intermittent construction impairment to agricultural and grazing activities is less than significant. Minimal amount of farmland conversion in a regional context is less than significant.	Temporary and intermittent construction impairment to potential grazing activities is less than significant.	Temporary and intermittent construction impairment to potential grazing activities is less than significant.	No adverse impacts to agricultural resources.	No adverse impacts to agricultural resources.	No adverse impacts to agricultural resources.	No adverse impacts to agricultural resources.	No adverse impacts to agricultural resources.	No adverse impacts to agricultural resources.	No adverse impacts to agricultural resources.

TABLE 6-2 (CONTINUED)
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES
SEGMENT 3

Environmental Factor	Antelope Substation Site	Proposed 500 kV T/L Antelope - Substation One	Alternative A 500 kV T/L	Alternative B 500 kV T/L	Proposed Substation One to Substation Two 220 kV T/L	Alternative C 220 kV T/L	Proposed Substation One Site	Alternative Substation 1A Site	Alternative Substation 1B Site	Alternative Substation 1C Site	Proposed Substation Two Site	Alternative Substation 2A Site	Alternative Substation 2B Site
Hazards and Hazardous Materials	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.	Less than Significant through the implementation of Construction SWPPP, SPCC Plan, and through development and implementation of other plans and programs required under State and federal laws.
Hydrology and Water Quality	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.	Less than Significant through implementation of the mitigation measures presented in Section 5.9.
Land Use and Planning	Less than significant pertaining to existing land uses and future planning by the City of Lancaster.	Less than significant pertaining to existing land uses and future planning by the City of Lancaster, Los Angeles County, and Kern County. Less than significant pertaining to land use designations for significant farm lands, habitat conservation, and mineral resources.	Less than significant pertaining to existing land uses and future planning by the City of Lancaster, Los Angeles County, and Kern County. Less than significant pertaining to land use designations for significant farm lands, habitat conservation, and mineral resources.	Less than significant pertaining to existing land uses and future planning by the City of Lancaster, Los Angeles County, and Kern County. Less than significant pertaining to land use designations for significant farm lands, habitat conservation, and mineral resources.	Less than significant pertaining to existing land uses and future planning by Kern County. Less than significant pertaining to land use designations for significant farm lands, habitat conservation, and mineral resources.	Less than significant pertaining to existing land uses and future planning by Kern County. Less than significant pertaining to land use designations for significant farm lands, habitat conservation, and mineral resources.	Less than significant pertaining to existing land uses and future planning by Kern County.	Less than significant pertaining to existing land uses and future planning by Kern County.	Less than significant pertaining to existing land uses and future planning by Kern County.	Less than significant pertaining to existing land uses and future planning by Kern County.	Less than significant pertaining to existing land uses and future planning by Kern County.	Less than significant pertaining to existing land uses and future planning by Kern County.	Less than significant pertaining to existing land uses and future planning by Kern County.

TABLE 6-2 (CONTINUED)
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES
SEGMENT 3

Environmental Factor	Antelope Substation Site	Proposed 500 kV T/L Antelope - Substation One	Alternative A 500 kV T/L	Alternative B 500 kV T/L	Proposed Substation One to Substation Two 220 kV T/L	Alternative C 220 kV T/L	Proposed Substation One Site	Alternative Substation 1A Site	Alternative Substation 1B Site	Alternative Substation 1C Site	Proposed Substation Two Site	Alternative Substation 2A Site	Alternative Substation 2B Site
Mineral Resources	No adverse impact. No mineral resources are present.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.	Less than Significant impact because the project would not limit the availability of mineral resources within a State or local jurisdiction.
Noise	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.	Less than significant through implementation of the mitigation measures presented in Section 5.12.
Population and Housing	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.	No adverse impact. Population and housing resources would not be affected.
Public Services/ Utilities	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Potentially significant impact due to conflict with existing buried gas pipeline that traverses site.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Less than significant through implementation of the mitigation measures presented in Section 5.14.	Potentially significant impact due to conflict with existing buried gas pipeline that traverses site.	Less than significant through implementation of the mitigation measures presented in Section 5.14.
Recreation	No adverse impact pertaining to recreational uses in the City of Lancaster.	No adverse impact pertaining to recreational uses in the City of Lancaster, Los Angeles County, and Kern County.	No adverse impact pertaining to recreational uses in the City of Lancaster, Los Angeles County, and Kern County.	No adverse impact pertaining to recreational uses in the City of Lancaster, Los Angeles County, and Kern County.	Recreational use impairment of Pacific Crest National Scenic Trail considered Adverse, but Less than Significant.	Recreational use impairment of Pacific Crest National Scenic Trail considered Adverse, but Less than Significant.	No adverse impact pertaining to recreational uses in Kern County.	No adverse impact pertaining to recreational uses in Kern County.	No adverse impact pertaining to recreational uses in Kern County.	Significant Adverse Impact due to on-site occurrence of the Pacific Crest National Scenic Trail (see Section 5.15).	No adverse impact pertaining to recreational uses in Kern County.	No adverse impact pertaining to recreational uses in Kern County.	No adverse impact pertaining to recreational uses in Kern County.

TABLE 6-2 (CONTINUED)
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES
SEGMENT 3

Environmental Factor	Antelope Substation Site	Proposed 500 kV T/L Antelope - Substation One	Alternative A 500 kV T/L	Alternative B 500 kV T/L	Proposed Substation One to Substation Two 220 kV T/L	Alternative C 220 kV T/L	Proposed Substation One Site	Alternative Substation 1A Site	Alternative Substation 1B Site	Alternative Substation 1C Site	Proposed Substation Two Site	Alternative Substation 2A Site	Alternative Substation 2B Site
Traffic and Transportation	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.	Less than significant short-term impacts pertaining to disruption of traffic and transportation through implementation of the mitigation measures presented in Section 5.16.

¹ Refer to Figures 3-1 and 3-3 for locations of proposed and alternative facilities and Section 3.0 for details.

Substation. Interconnection agreements for the potential generation have not been entered into as of September 2005. The proposed Segment 2 project is 21.0 miles of 500 kV T/L and 0.5 mile of 220 kV T/L between Antelope and Vincent substations, initially energized at 220 kV. The proposed Segment 3 project consists of 25.6 miles of new 500 kV T/L, initially energized at 220 kV, from Antelope to a new substation (Substation One) located near Cal Cement. Segment 3 continues with 9.6 miles of new 220 kV T/L from Substation One to a new substation (Substation Two) near Monolith. SCE's obligation to interconnect and integrate new generation resources 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 certain of the Segment 2 and Segment 3 facilities would be operated initially at 220 kV, it is anticipated that the CAISO would approve interconnection using 500 kV design and construction standards to help accommodate up to 4,400 MW of potential new wind generation north of Antelope.

6.2.2 Segment 2 – Antelope to Vincent

6.2.2.1 Antelope to Vincent 500 kV T/L

The proposed Antelope Transmission Project, Segment 2 – Antelope to Vincent 500 kV T/L is SCE's Preferred Alternative. The currently preferred T/L route constitutes a route modification from what was originally identified in December 2004. The originally proposed route paralleled the existing 17.8 mile-long T/L corridor between the Antelope and Vincent substations. The current preferred route is parallel to the existing T/L corridor in the northern third and southern third of the alignment but departs from the corridor and is routed through open space areas on the Ritter Ranch and Anaverde developments in the middle third (Figure 3-2, Sheet 2 of 3). The preferred route is 21.5 miles (20.0 miles of 500 kV T/L and 0.5 mile of 220 kV T/L) in length. SCE has also identified two routing alternatives that occur adjacent to and/or within the existing T/L corridor, namely Alternative AV1 and Alternative AV2 (Figure 3-2, sheet 2 of 3). The current preferred route avoids and/or minimizes impacts to existing and proposed infrastructure and residential development. No other viable alternative routes to the east or west of the existing T/L corridor have been identified by SCE for Segment 2.

The proposed project has determinations of No Adverse Impact regarding the resource topics of Recreation. The proposed project has determinations of Less than Significant for the resource categories of Agricultural Resources, Land Use and Planning, Mineral Resources, Population and Housing, Public Services/Utilities, and Traffic and Transportation. The proposed project has determinations of Less than Significant through the implementation of the mitigation measures outlined in this PEA, for the resource categories of Aesthetics, Air

Quality, Biological Resources, Cultural Resources, Geological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, and Noise.

6.2.2.2 Antelope and Vincent Substations

Projected impacts from substation facility expansion and modification at the existing Antelope and Vincent substations were assessed as No Adverse Impact, Less than Significant, and Less than Significant With Mitigation Incorporation, for the various resource categories, as summarized in Table 6-1.

6.2.3 Segment 3 – Antelope to Substations One and Two**6.2.3.1 Proposed Antelope Substation to Substation One and Alternatives A and B, 500 kV T/L Routes**

The proposed Antelope Transmission Project, Segment 3 – Antelope to Substation One 500 kV T/L is SCE's Proposed Alternative. Alternative A and Alternative B T/L routes have also been identified by SCE for Segment 3. The currently preferred Segment 3 500 kV T/L route constitutes a revision from what was originally identified in December 2004. The current preferred route basically follows the route previously identified as Alternative A in the December 2004 filing. Comparison of the proposed and both alternative T/L routes indicates that the proposed route and Alternative B route would potentially cross fewer miles of low-density rural residential land than the Alternative A route; however, the potential impacts to land use and traffic/transportation are not considered to be substantially different among the three alternatives.

The proposed and Alternative A and Alternative B T/L routes and associated facilities are considered to have No Adverse Impacts pertaining to Population and Housing. These three alternatives have determinations of Less than Significant for the resources categories of Agricultural Resources, Land Use and Planning, and Mineral Resources. These three alternatives have determinations of Less than Significant through the implementation of the mitigation measures outlined in this PEA, regarding the resource categories of Aesthetics, Air Quality, Biological Resources, Geological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Public Services/Utilities, and Traffic and Transportation.

Potential impacts to the visual environment along the proposed and Alternative A T/L routes are identified adjacent to the proposed Del Sur Ranch development in the City of Lancaster, and along the Alternative B T/L route adjacent to the Copa de Oro/Kern Ross Estate development in Kern County. These potential impacts are regarded as not substantially different among the three alternatives.

6.2.3.2 Antelope Substation

Impacts associated with expansion work to be done at the existing SCE Antelope Substation were assessed as No Adverse Impact, Less than Significant, and Less than Significant With Mitigation Incorporation, for the various resource categories, as summarized in Table 6-2.

6.2.3.3 Substation One (Proposed) and Alternate 1A, 1B, and 1C Sites

The Substation One site is the SCE Proposed site and the 1A, 1B, and 1C sites are identified as alternative sites. The 1C site is currently regarded as an infeasible site due to the occurrence of an underground gas line and the presence of the Pacific Crest National Scenic Trail through the site. Construction of the Substation 1C site would be regarded as an adverse and significant impact upon the Pacific Crest Scenic Trail and would require implementation of the rigorous mitigation described in Section 5.15.

At the preferred location for Substation One, a major pipeline was identified as bisecting the proposed site. To avoid any potential problems with the pipeline, the preferred substation location has been moved approximately one-half mile to the east, resulting in a buffer of approximately 600 feet between the pipeline and the substation perimeter.

Additionally, a buried cable line has also been identified along the south edge of Oak Creek Road, directly in front of the Substation One preferred site. This line, along with any other buried lines, will be identified by the land title search, the topographic survey and finally by an underground alert service provider as is the standard practice for any land disturbance project. If necessary, SCE would pay to relocate any lines that are determined to have an adverse impact on the project.

The proposed site and the three alternate sites have equivalent significance determinations (i.e., No Adverse Impact, Less than Significant, and Less than Significant With Mitigation Incorporation, variously) for all resources categories except for the 1C site with respect to the categories of Aesthetics and Recreation. The 1C site has determinations of Potentially Significant pertaining to visual aesthetics and a Significant Adverse pertaining to recreational use of the Pacific Crest National Scenic Trail.

6.2.3.4 Substation One to Two (Proposed) 220 kV and Alternative C 220 kV T/L Routes

The proposed Antelope Transmission Project, Segment 3 - Substation One to Substation Two 220 kV T/L is SCE's preferred alternative. The currently preferred Segment 3 220 kV T/L route constitutes a revision from what was originally identified in December 2004. The

SECTION 6.0

SIGNIFICANT ENVIRONMENTAL IMPACTS AND COMPARISON OF ALTERNATIVES

Antelope Transmission Project – Segments 2 & 3

current preferred route basically follows what was previously identified as Alternative C in the December 2004 filing.

SCE has also identified the Alternative C route (which corresponds to the proposed route in the December 2004 filing).

The proposed Substation One to Substation Two and Alternative C 220 kV T/L routes are considered to have No Adverse Impacts pertaining to Population and Housing. These two alternatives have determinations of Less than Significant for the resources categories of Agricultural Resources, Land Use and Planning, and Mineral Resources. The proposed Substation One to Two 220 kV T/L route is also considered to have Less than Significant impacts for aesthetics. The Alternative C route is determined to have adverse but Less than Significant impacts related to aesthetics on the existing homes in the vicinity of the Cameron Canyon Road crossing area. These proposed Substation One to Substation Two and Alternative C 220 kV T/L routes have determinations of Less than Significant through the implementation of the mitigation measures outlined in this PEA, regarding the resource categories of Air Quality, Biological Resources, Geological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Public Services/Utilities, and Traffic and Transportation.

Determinations of Adverse, but Less than Significant, are identified for both alternatives pertaining to the Recreation resources category due to T/L route crossings of the Pacific Crest National Scenic Trail.

6.2.3.5 Substation Two (Proposed) and Alternative 2A and 2B Sites

The Alternate 2A site is determined infeasible as a 220 kV substation alternative due to the presence of industrial facilities and is not discussed further. The Substation Two site is the SCE preferred site, and the Alternative 2B site is considered a potentially viable alternative.

At the original preferred location for Substation Two, a natural gas line bisects the site. In addition, a radio antenna is located within the site. For these reasons, the preferred site has been moved approximately 850 feet to the west. This new site is approximately 1,000 feet from the existing natural gas line. Although the probabilities are unlikely, there might be some buried utilities located on or adjacent to this new site. The proposed site and the Alternative 2B site have equivalent significance determinations (i.e., No Adverse Impact, Less than Significant, and Less than Significant With Mitigation Incorporation, variously) for all resources categories except Aesthetics. The 2B site has a potential impact regarded as Less than Significant to the visual environment associated with the required 220 kV T/L crossing of State Route 58.

6.3 CONCLUSION**6.3.1 Segment 2 – Antelope to Vincent**

The proposed Segment 2 – Antelope to Vincent 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) would minimize impacts to future residential development; 3) would minimize system reliability risk by reducing the number of T/L crossings; and 4) no other potentially viable alternative routes to the east or west of the existing R-O-W corridor have been identified.

6.3.2 Segment 3 – Antelope to Substations One and Two

The proposed Antelope to Substation One kV T/L route is considered to be the preferred Alternative for the following reasons:

- Construction and operation result in any identified unavoidable adverse significant impacts
- Would minimize impacts to existing homes

The Substation One site is considered to be the preferred Site relative to Alternative Sites 1A, 1B, and 1C. Alternative Sites 1A and 1C have been determined to be infeasible.

The proposed Substation One to Substation Two 220 kV T/L route is considered to be the preferred 220 kV T/L route relative to the Alternative C route because it would avoid impacts to the homes that would be impacted by the Alternative C route in the Cameron Canyon Road crossing area.

The proposed Substation Two site is considered to be the preferred Substation Site since it has no identified unavoidable significant effects and it would involve less new 220 kV T/L construction than Alternative 2B. The Alternative site 2A has been found to be infeasible due to the presence of an existing industrial facility on the site.