

**6.1 SIGNIFICANT OR POTENTIALLY SIGNIFICANT ENVIRONMENTAL
IMPACTS**

As discussed in Section 5.0, the proposed project (including the Alternative 1 and Alternative 2 T/L routes and substation facility modifications) 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, Land Use, Noise, and Traffic and Transportation. However, with implementation of the applicant-proposed mitigation measures (APMs) outlined in Section 5.0 of this PEA, these potential impacts would be mitigated to less than significant levels.

There would be no expected adverse impacts to the resource categories of Agriculture, Mineral Resources, Population and Housing, Public Services/Utilities, Recreation, and Socioeconomics/Environmental Justice for any of the proposed or alternative T/L routes.

6.2 COMPARISON OF ALTERNATIVES

The proposed Antelope Transmission Project, Segment 1 - Antelope to Pardee 500 kV T/L is the Preferred Alternative. The Preferred Alternative would satisfy the project objectives of implementing SCE's MOS to interconnect and integrate potential alternative energy projects to SCE's electrical system. The proposed Antelope to Pardee 500 kV 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 the Antelope Substation and avoid the need to construct, tear down, and replace multiple 220 kV facilities with 500 kV facilities in the future. Refer to Section 2.0 for more information.

All three of the alternatives considered would have similar levels of impacts to the resource categories of Agricultural Resources, Air Quality, Biological Resources, Geological Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services/Utilities, Recreation, Socioeconomics/Environmental Justice, and Traffic and Transportation. Through

the implementation of the mitigation measures outlined in this PEA, all three alternatives are regarded as equivalent regarding these resources categories.

As described in Table 5.2-1, all three alternatives would have Aesthetic visual impacts in the Haskell Canyon and Copper Hill residential areas. However, Alternative 2 would eliminate the possibility of a future second Pardee to Vincent 500 kV T/L by using a portion of the existing vacant R-O-W. Due to the routing of Alternative 1, it would have Aesthetic impacts in the Leona Valley and Green Valley areas, which are not traversed by the proposed route.

As described in Section 5.6, a greater number of known Cultural Resources are recorded along the proposed route than along the Alternative 1 route. However, through the implementation of the mitigation measures specified in Section 5.6, both alternatives would be equivalent with regard to project-related impacts to Cultural Resources.

In summary, the differences in potential project-related environmental impacts between the three alternatives are not considered to be substantially different. A comparison of alternatives is presented in Table 6-1.

6.3 CONCLUSION

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.

**TABLE 6-1
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES¹**

Environmental Factor	Substations		500 kV T/Ls		
	Antelope Substation Site	Pardee Substation Site	Proposed Antelope to Pardee	Alternative 1 - Antelope to Pardee	Alternative 2 - Antelope to Pardee
Aesthetics	Impacts resulting from short-term construction activities, and incremental changes in Antelope facilities extending beyond the existing substation perimeter, are considered to be less than significant.	Substation modifications would be contained within the existing substation perimeter resulting in a less than significant impact.	<p>Impacts resulting from short-term construction activities, and incremental visual changes due to replacement of existing 66 kV towers with new 500 kV towers between mile 0.0 and 19.3, are considered to be less than significant.</p> <p>Construction of a new transmission line with 500 kV towers within the existing transmission corridor through Haskell Canyon and Copper Hill residential areas (mile 19.3 to 25.6) would incrementally add to the existing visual impact which would be an adverse, but less than significant impact.</p>	<p>Impacts resulting from short-term construction activities, and incremental visual changes due to construction of a new transmission line with 500 kV towers in a sparsely populated area between mile 0.0 and 3.9, and adjacent to existing T/Ls between mile 3.9 and 21.8, are considered to be less than significant. Alternative 1 would incrementally add to the visual impact in the vicinity of residential areas in the Leona Valley (mile 5.5 to 6.3), Green Valley (mile 8.3 to 11.0), and Haskell Canyon (miles 21.8 to 22.8).</p> <p>If Alternative 1 were selected, the last 5.1 miles to the Pardee Substation would coincide with the proposed route between mile 19.3 and 25.6 and would include the associated impacts.</p>	Construction of a new transmission line with single circuit 500 kV towers within the existing transmission corridor through Haskell Canyon and Copper Hill residential areas (mile 19.3 to 25.6) would incrementally add to the existing visual impact, which would be an adverse, but less than significant impact.
Agricultural Resources	No impact. No farmland present.	No impact. 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.	No impact. No farmland present.
Air Quality	Less than Significant. Control measures would be implemented to minimize equipment emissions and fugitive dust.	Less than Significant. Control measures would be implemented to minimize equipment emissions and fugitive dust.	Less than Significant. Control measures would be implemented to minimize equipment emissions and fugitive dust.	Less than Significant. Control measures would be implemented to minimize equipment emissions and fugitive dust.	Less than Significant. Control measures would be implemented to minimize equipment emissions and fugitive dust.
Biological Resources	No impact. No sensitive biological resources.	No impact. An existing developed site with no sensitive biological resources.	Less than significant through the implementation of mitigation measures to: 1) avoid and/or minimize potential impacts to native habitats and sensitive biological resources; and 2) reclaim and revegetate temporarily disturbed areas.	Less than significant through the implementation of mitigation measures to: 1) avoid and/or minimize potential impacts to native habitats and sensitive biological resources; and 2) reclaim and revegetate temporarily disturbed areas.	Less than significant through the implementation of mitigation measures to: 1) avoid and/or minimize potential impacts to native habitats and sensitive biological resources; and 2) reclaim and revegetate temporarily disturbed areas.

**TABLE 6-1 (CONTINUED)
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES¹**

Environmental Factor	Substations		500 kV T/Ls		
	Antelope Substation Site	Pardee Substation Site	Proposed Antelope to Pardee	Alternative 1 - Antelope to Pardee	Alternative 2 - Antelope to Pardee
Cultural Resources	Less than significant through the implementation of mitigation measures to: 1) conduct a full-scale cultural resources reconnaissance; and 2) implement construction activity monitoring to protect and recover cultural resources.	No impact. An existing developed site with no cultural resources.	Less than significant through the implementation of mitigation measures to: 1) conduct a full-scale cultural resources reconnaissance; and 2) implement construction activity monitoring to protect and recover cultural resources.	Less than significant through the implementation of mitigation measures to: 1) conduct a full-scale cultural resources reconnaissance; and 2) implement construction activity monitoring to protect and recover cultural resources.	Less than significant through the implementation of mitigation measures to: 1) conduct a full-scale cultural resources reconnaissance; and 2) implement construction activity monitoring to protect and recover cultural resources.
Geological Resources	Determinations of no impacts pertaining to ground rupture, liquefaction, and erosion. Determinations of mitigable to levels of less than significant for the categories of strong ground shaking, expansive and collapsible soils, landslides, and subsidence, based on implementation of geotechnical and engineering studies and the associated design recommendations.	Determinations of no impacts pertaining to ground rupture and erosion. Determinations of mitigable to levels of less than significant for the categories of strong ground shaking, liquefaction, expansive and collapsible soils, landslides, and subsidence, based on implementation of geotechnical and engineering studies and the associated design recommendations.	A determination that all potential geologic hazards are mitigable to levels of less than significant based on implementation of geotechnical and engineering studies and the associated design recommendations.	A determination that all potential geologic hazards are mitigable to levels of less than significant based on implementation of geotechnical and engineering studies and the associated design recommendations.	A determination that all potential geologic hazards are mitigable to levels of less than significant based on implementation of geotechnical and engineering studies and the associated design recommendations.
Hazards and Hazardous Materials	Less than significant through the implementation of Construction SWPPP, SPCC Plan, and SCE health and safety plans 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 SCE health and safety plans 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 SCE health and safety plans 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 SCE health and safety plans 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 SCE health and safety plans 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 recommended mitigation measures presented in Section 5.9.4 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.9.4 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.9.4 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.9.4 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.9.4 of this PEA.
Land Use and Planning	Less than significant determinations pertaining to existing land use and future planning by the City of Lancaster.	No impact because it is an existing developed site.	Less than significant determinations pertaining to existing land uses, future planning, and/or land management by the cities of Lancaster and Santa Clarita, the County of Los Angeles, and the USFS.	Less than significant determinations pertaining to existing land uses, future planning, and/or land management by the cities of Lancaster and Santa Clarita, the County of Los Angeles, the BLM, and the USFS.	Less than significant determinations pertaining to existing land uses, future planning, and/or land management by the City of Santa Clarita and the County of Los Angeles.
Mineral Resources	No impact. No mineral resources are present.	No impact. No mineral resources are present.	Less than significant impact because the project would not limit the availability of mineral resources within a federal, State, or local jurisdiction.	Less than significant impact because the project would not limit the availability of mineral resources within a federal, State, or local jurisdiction.	Less than significant impact because the project would not limit the availability of mineral resources within a federal, State, or local jurisdiction.

**TABLE 6-1 (CONTINUED)
SUMMARY OF IMPACTS AND COMPARISON OF ALTERNATIVES¹**

Environmental Factor	Substations		500 kV T/Ls		
	Antelope Substation Site	Pardee Substation Site	Proposed Antelope to Pardee	Alternative 1 - Antelope to Pardee	Alternative 2 - Antelope to Pardee
Noise	Less than significant through implementation of the recommended mitigation measures presented in Section 5.12 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.12 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.12 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.12 of this PEA.	Less than significant through implementation of the recommended mitigation measures presented in Section 5.12 of this PEA.
Population and Housing	No adverse impact. Population and housing resources would not be affected.	No impact. Population and housing resources would not be affected.	No impact. Population and housing resources would not be affected.	No impact. Population and housing resources would not be affected.	No impact. Population and housing resources would not be affected.
Public Services/Utilities	No impact. No public services would be affected.	No impact. No public services would be affected.	No impact. No public services would be affected.	No impact. No public services would be affected.	No impact. No public services would be affected.
Recreation	No impact pertaining to recreational uses in the City of Lancaster.	No impact because it is an existing developed site.	No impact pertaining to recreational uses in the cities of Lancaster and Santa Clarita, and the County of Los Angeles. Less than significant impact upon recreational opportunities and uses in the Angeles National Forest based upon any stipulations in a USFS Special Use Permit issued to the project.	No impact pertaining to recreational uses in the cities of Lancaster and Santa Clarita, and the County of Los Angeles. Less than significant impact upon recreational opportunities and uses in the Angeles National Forest based upon any stipulations in a USFS Special Use Permit issued to the project.	No impact pertaining to recreational uses in the City of Santa Clarita, and the County of Los Angeles.
Socioeconomics/Environmental Justice	No adverse impact. Potential affects to low-income and/or ethnic populations, and/or unequal distribution of socioeconomic benefits, and/or disproportionate share of negative environmental consequences, not expected to occur.	No impact. Potential affects to low-income and/or ethnic populations, and/or unequal distribution of socioeconomic benefits, and/or disproportionate share of negative environmental consequences, not expected to occur.	No impact. Potential affects to low-income and/or ethnic populations, and/or unequal distribution of socioeconomic benefits, and/or disproportionate share of negative environmental consequences, not expected to occur.	No impact. Potential affects to low-income and/or ethnic populations, and/or unequal distribution of socioeconomic benefits, and/or disproportionate share of negative environmental consequences, not expected to occur.	No impact. Potential affects to low-income and/or ethnic populations, and/or unequal distribution of socioeconomic benefits, and/or disproportionate share of negative environmental consequences, not expected to occur.
Traffic and Transportation	Less than significant impacts pertaining to disruption of local traffic and transportation.	Less than significant impacts pertaining to disruption of local traffic and transportation.	Less than significant impacts pertaining to federal highway transportation, roads within the Angeles National Forest, and local traffic and transportation.	Less than significant impacts pertaining to federal highway transportation, roads within the Angeles National Forest, and local traffic and transportation.	Less than significant impacts pertaining to local traffic and transportation.

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