

7.1 INTRODUCTION

Consistent with CEQA requirements and CPUC Rule 17.1, this section discusses the potential significant cumulative effects of the proposed project, Segments 2 and 3 of the Antelope Transmission Project, when added to other past, present, and probable future projects in the vicinity of the proposed project. The purpose of the proposed project is to interconnect and integrate potential alternative energy projects (owned by other entities) and SCE's electrical system, as discussed in Section 2.0 of this PEA.

In summary, the proposed project consists of constructing the following T/L system components associated with Segments 2 and 3:

- New, 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) (Segment 2) (including relocation of approximately 4.4 miles of 66 kV subtransmission line south of the Antelope Substation and construction of approximately 2,400 feet of 220 kV T/L north of the Vincent Substation)
- New, 25.6-mile-long Antelope to Substation One (new) 500 kV T/L (initially energized at 220 kV) (Segment 3)
- New, 9.6-mile-long Substation One to Substation Two (new) 220 kV T/L (northern portion of Segment 3 in the Tehachapi Wind Farm Area)
- New, 500/220/66 kV Substation One and new 220/66 kV Substation Two

The proposed Antelope to Vincent 500 kV T/L route (Segment 2) would be constructed completely in Los Angeles County (refer to Figures 7-1 and 3-2) and would parallel an existing SCE T/L corridor over the majority of the length between SCE's existing Antelope and Vincent substations. The T/L route (and the existing SCE T/L corridor it parallels over the majority of its length) traverses portions the proposed Ritter Ranch, Anaverde, and Palmdale 1000 developments near Palmdale (refer to Figures 7-1 and 3-2). Based on discussions between SCE, real estate developers, local governmental agencies, school districts, and the general public, the proposed Segment 2 T/L route has been routed onto Ritter Ranch open space to minimize or avoid conflicts with the Ritter Ranch residential development and future planned schools. The proposed Segment 2 T/L route traverses the extreme southwest boundaries of the Anaverde and Palmdale 1000 developments.

The proposed Antelope to Substation One 500 kV T/L would be constructed in northern Los Angeles and southern Kern counties (refer to Figures 7-1 and 3-3) and would follow existing roads over the majority of its length. The proposed 500 kV T/L route between the Antelope Substation and Substation One traverses the western border of the proposed Del Sur Ranch development in Lancaster (refer to Figures 7-1 and 3-3). The proposed Substation One to

Substation Two 220 kV T/L would be constructed completely in Kern County in the existing Tehachapi Wind Farm Area (also known as Eastern Wind Resource Area).

The proposed Antelope Transmission Project also includes Segment 1 (Antelope-Pardee, 500 kV T/L) (refer to Figure 7-1). Segment 1 is addressed in a separate Certificate of Public Convenience and Necessity (CPCN) Application/Proponents Environmental Assessment (PEA) filed with the CPUC in December 2004. SCE currently anticipates that the Segment 1 project would be constructed between July 2006 and December 2007.

SCE currently anticipates that the Segments 2 and 3 portion of the overall Antelope Transmission Project would be constructed between March 2008 and May 2009 (i.e., no overlap with Segment 1 construction timeframe). The construction schedule and workforce, construction equipment, land disturbance, and waste generation estimates for Segments 2 and 3 are presented in Section 3.9.

To determine the potential for cumulative impacts associated with the proposed project Segments 2 and 3, planning department staff were contacted in Los Angeles County, Kern County, the Southern California Association of Governments (SCAG) and the cities of Palmdale, Lancaster, and Tehachapi. Future and pending development projects are either approved or pending approval by the local land use authority, and in some cases are already under construction in the project vicinity. For the most part, the projects are residential or commercial developments.

7.1.1 Segment 2 (Antelope – Vincent)

As discussed in Section 4.10, Segment 2 is proposed to be located adjacent to an existing utility corridor over most of its length between the Antelope and Vincent substations. As shown on Figure 3-2, this T/L corridor traverses existing low-density non-urban residential development on the southwest extent of the City of Lancaster to the border with the City of Palmdale. The T/L then continues southeast for a few miles through low-density residential development, across the California Aqueduct, and across a quarry and reclamation area. The T/L traverses open space and agricultural areas of Los Angeles County to the limits of the City of Palmdale. Within these limits occur the Ritter Ranch Specific Plan area, which is approved and commencing initial development activities, and the Anaverde (City Ranch) Specific Plan area, which is under development. In addition, the proposed Segment 2 T/L route traverses the southwest corner of the proposed Palmdale 1000 development. The last part of the T/L corridor traverses open space and agricultural lands for several miles through the mountains and hills of the Sierra Pelona to the Vincent Substation location in the upper Soledad Canyon area. SCE is proposing to construct a low-profile 66/12 kV substation within the Ritter Ranch development to serve future load in the area. There are no other known planned electric power related plans or related projects proposed in the vicinity of the project

area with the exception of planned wind farm development in the Tehachapi Wind Farm area (concentrated approximately 25 miles to the north of SCE's Antelope Substation), and Segments 1 and 3 of SCE's Antelope Transmission Project.

7.1.2 Segment 3 (Antelope – Substations One and Two)

As discussed in Section 4.10, Segment 3 is proposed to be located adjacent to portions of existing utility corridors along the southern portion, and new R-O-W for the remainder of Segment 3. As shown on Figure 3-3, this T/L R-O-W traverses existing low-density non-urban and single-family residential development in the northwestern portion of the City of Lancaster. Then it continues northward through low-density non-urban development and agricultural land within Los Angeles County to the boundary with Kern County. Within Kern County the T/L traverses low-density non-urban development, agricultural lands, and open space to the Substation One location. The proposed 220 kV T/L route between proposed Substations One and Two then turns westward and northward into the Tehachapi Mountains via Oak Creek Canyon across open space and wind energy farms to the Substation Two location near Monolith.

7.2 SIGNIFICANCE CRITERIA

Consistent with CEQA Section 15130, a project could have a significant cumulative impact if a change in the environment resulted from the incremental impact of the proposed project when added to other closely related past, present, and probable future projects.

7.3 ANALYSIS OF CUMULATIVE IMPACTS

This section analyzes whether the proposed project, when combined with other proposed projects in the area, would result in either short-term or long-term environmental impacts. Short-term impacts are those related primarily to project construction, and long-term impacts are those related primarily to permanent project features or operation of the project. For the proposed project, potential short-term construction impacts would include increased traffic, air emissions, noise, and soil erosion/water quality impacts. Short-term construction-related impacts are not typically considered significant under CEQA. Potential long-term impacts would include those related to visual and biological resources impacts.

7.3.1 Short-Term Construction Impacts

7.3.1.1 Traffic and Transportation

7.3.1.1.1 Segment 2. As discussed in Section 5.16, construction and operation of Segment 2 would not result in any potentially significant long-term traffic or transportation impacts. The majority of the Segment 2 construction would take place along an existing utility

corridor. As noted above, there is existing and proposed residential development in the areas located within the City of Palmdale and the rest of the existing corridor lies within the City of Lancaster or undeveloped unincorporated Los Angeles County. While it is expected that the construction of some development in the Palmdale and Lancaster areas will likely occur during the same time frame as the construction time frame for the proposed project, the incremental contribution of SCE construction equipment using the same roadways would not constitute a considerable contribution to cumulative traffic or transportation impacts. There are no long-term traffic and transportation impacts associated with operation of Segment 2; therefore, no contribution to significant cumulative impacts would result.

7.3.1.1.2 Segment 3. As discussed in Section 5.16, construction and operation of Segment 3 would not result in any potentially significant long-term or transportation impacts. All of the Segment 3 construction would take place within existing utility corridors or newly acquired R-O-W along rural roads and in open space areas. As noted above, there are existing low-density non-urban residential, agricultural, and open space lands along Segment 3 within the City of Lancaster, Los Angeles County, and Kern County. While it is expected that the construction of some development (e.g., the proposed Del Sur Ranch community in the City of Lancaster) may occur during the same time frame as the construction frame for the proposed project, the incremental contribution of SCE construction equipment using the same roadways would not constitute a considerable contribution to cumulative traffic or transportation impacts. There are no long-term traffic and transportation impacts associated with operation of Segment 3; therefore, no contribution to significant cumulative impacts would result.

7.3.1.2 Air Quality

As discussed in Section 5.4, construction and operation of Segments 2 and 3 would not result in any appreciable contribution to long-term air quality emissions or potentially significant impacts. Temporary air emissions would occur as a result of use of construction vehicles and equipment and from PM₁₀ (dust) produced during grading activities. With the implementation of standard dust suppression measures to reduce PM₁₀, impacts would be expected to be less than significant. There are no long-term air quality impacts associated with operation of the proposed project; therefore, no contribution to significant cumulative impacts would result.

7.3.1.3 Noise

As discussed in Section 5.12, construction and operation of Segments 2 and 3 would not result in any potentially significant noise impacts. Temporary noise would likely affect nearby residents during the construction of Segment 2 in the areas of residential development (i.e., Ritter Ranch, Anaverde, and possibly the Palmdale 1000 residential developments) in western Palmdale. In addition, temporary construction noise impacts could also occur along

the western portion of the proposed Del Sur Ranch or Copa De Oro/Kern Ross Estate developments along Segment 3 if construction of these developments occurs prior to the planned completion of Segment 3. Construction activities would probably be limited to daylight hours, thereby helping to minimize adverse noise effects on nearby residences. In general, those portions of the project that are within undeveloped areas in unincorporated Los Angeles and Kern counties are not expected to have adverse noise impacts due to the minimal number of sensitive receptors.

Taken into consideration with other proposed development in or near Segments 2 and 3, the incremental contribution of noise from construction and operation of the proposed project would not be cumulatively considerable.

7.3.1.4 Soil Erosion/Water Quality

As discussed in Sections 5.7 and 5.9, construction of the proposed project is expected to result in short-term increases in soil erosion and potential water quality impacts due to grading activities associated with substation and T/L construction. Implementation of soil erosion/water quality protection measures to be specified in the SWPPP, as well as SCE-proposed restoration measures for disturbed areas, would be expected to limit project-specific and potential cumulative impacts to levels of insignificance.

7.3.2 Long-Term Impacts

7.3.2.1 Aesthetics

7.3.2.1.1 Segment 2 (Antelope – Vincent). As discussed in Section 5.2, construction and operation of the proposed project would be expected to result in adverse impacts to visual resources, but these impacts would be less than significant. The proposed project would result in an incremental increase in existing visual impacts (e.g., towers and conductors) along Segment 2 due to the addition of 500 kV facilities adjacent to the existing T/L corridor between Antelope and Vincent and on portions of the Ritter Ranch, Anaverde, and Palmdale 1000 development areas. The 500 kV facilities would be built primarily along an existing T/L corridor where the natural landscape has been modified for many years before the current residences and other pending development were present. The balance of the Antelope-Vincent 500 kV T/L route would be constructed in open space areas within Ritter Ranch as a result of input from the public and Ritter Ranch developers. Natural contours and distance from the future residential units would reduce adverse visual impacts associated with the Segment 2 500 kV T/L to less than significant levels. There are no known similar projects proposed in the project area that could impact visual resources, but expanding residential development in the Palmdale area could expose more residences to views of the expanded T/L corridor.

7.3.2.2 Biological Resources

As discussed in Section 5.5, the proposed project is not expected to impact any federal or state listed wildlife species. Furthermore, potential impacts to listed and other special-status plant species would be avoided and/or minimized by following the mitigation directives presented in Section 5.5. The incremental contribution of impacts to biological resources from the proposed project, when combined with other proposed projects in the project area, would be expected to be less than significant.

7.4 ALTERNATIVES

7.4.1 Segment 2 (Antelope – Vincent)

SCE has identified two 500 kV T/L route alternatives for Segment 2; alternative route Antelope-Vincent 1 (AV1) and alternative route Antelope-Vincent 2 (AV2). Alternative route AV1 is approximately 2.1 miles long (refer to Figures 7-1 and 3-2) departing the proposed Segment 2 route at approximately MP 5.7 and reuniting with the proposed route at approximately MP 7.6. Alternative AV1 is located parallel to and east of the proposed Segment 2 route. Alternative AV1 would avoid three existing homes that would need to be removed if the corresponding portion of the proposed route were implemented instead. AV1 would decrease system reliability by increasing the number of T/L crossings.

Alternative Route AV2 is approximately 3.1 miles long (refer to Figures 7-1 and 3-2) departing the proposed Segment 2 route at approximately MP 8.1 and rejoining it at approximately MP 14.9. Alternative AV2 crosses the Ritter Ranch and Anaverde residential developments. Based on discussions between SCE, real estate developers, local governmental agencies, and school districts, the proposed route would result in fewer impacts to planned homes and future planned schools in the Ritter Ranch and Anaverde developments. However, the proposed route would involve construction of a new T/L (approximately MPs 8.1 to 10.6) on Ritter Ranch where no T/Ls currently exist. Conversely, Alternative AV2 parallels the existing T/L corridor over its entire 3.1-mile length. If Alternative AV2 were selected for implementation, the overall length of the Segment 2 T/L route would be reduced by approximately 3.7 miles (i.e., versus the proposed Segment 2 route). Cumulative impacts due to construction and operation of Alternatives AV1 and AV2 would be expected to be similar to those associated with the proposed Segment 2 route. However, Alternative AV1 would be expected to result in less project-specific impacts on three homes that would need to be removed by the corresponding portion of the proposed route. The proposed Segment 2 500 kV T/L route would be expected to have less short-term and long-term impacts on the residential developments on the Ritter Ranch and Anaverde than Alternative AV2.

7.4.2 Segment 3 (Antelope – Substations One and Two)

7.4.2.1 Antelope to Substation One

Two potentially viable alternative 500 kV T/L routes (Alternatives A and B; refer to Figures 7-1 and 3-3) have been identified. Alternatives A and B would both involve constructing a 500 kV T/L between the Antelope Substation and Substation One on different routes than the proposed route. The proposed route and Alternatives A and B all follow existing roads over the majority of their lengths.

Cumulative impacts due to construction and operation of Alternatives A and B would be expected to be similar to those associated with the proposed route. The proposed route and Alternative A would both be expected to potentially result in greater long-term cumulative effects (e.g., visual) on the proposed Del Sur Ranch development, while Alternative B would potentially result in greater effects on the proposed Copa de Oro/Kern Ross Estate development.

7.4.2.2 Substation One to Substation Two

Alternative C (refer to Figures 7-1 and 3-3) has been identified as a potentially viable 220 kV T/L route alternative to the proposed route between Substation One and Substation Two. Additionally, several 500 kV and 220 kV substation alternatives have been identified. Several of the alternative substations are not viable due to potential conflicts with existing major natural gas pipelines within the sites. From a cumulative impact perspective, no significant cumulative effects are expected to occur in the wind farm area associated with the proposed project or alternatives. The Alternative C 220 kV T/L route between Substation One and Substation Two would be expected to result in long-term visual impacts on several homes near the area where it crosses Cameron Canyon Road. The proposed route would avoid impacting these homes.

7.5 OTHER PROJECTS

7.5.1 Antelope Transmission Project – Segment 1

Construction and operation of Segments 2 and 3 of the proposed Antelope Transmission Project, together with Segment 1 (Antelope to Pardee) (refer to Figure 7-1), would result in greater short-term (e.g., noise, traffic, air quality, soil erosion) and long-term (e.g., visual/aesthetic) effects than Segments 2 and 3 alone. Cumulative effects would be greatest in the vicinity of the existing SCE Antelope Substation (western Lancaster) where all three T/L segments originate. Construction of Segment 1 would begin first followed by Segments 2 and 3. Implementation of Segment 1 would also facilitate and accommodate the

construction of Segments 2 and 3. Refer to the separate CPCN Application/PEA for Segment 1 for more information about impacts associated with Segment 1.

7.5.2 Generation Tie-Lines

Construction of the Antelope Transmission Project would result in the construction of generation tie lines from various wind generation sites to the closest corresponding substation. This would result in greater short-term (e.g., noise, traffic, air quality, soil erosion) and long-term (e.g., visual/aesthetic) cumulative effects in the vicinity of the substations where the generation tie-lines would interconnect with the SCE grid.

7.5.3 Wind Farms

The purpose and need for the Antelope Transmission Project is to facilitate development of renewable resources in northern Los Angeles and Kern counties. Consequently, construction of the Antelope Transmission Project would facilitate construction of numerous wind generation sites throughout northern Los Angeles and Kern counties. This would result in greater short-term (e.g., noise, traffic, air quality, soil erosion) and long-term (e.g., visual/aesthetic) cumulative effects in applicable portions of Los Angeles and Kern counties.

7.5.4 SCE-Pacific Gas & Electric System Intertie

A comprehensive transmission development plan for phased expansion of transmission capability in the Tehachapi area is currently in progress as part of a collaborative study effort as ordered by the CPUC (Ordering Paragraph No.4 of Decision 04-06-010). Additional transmission facilities beyond the Antelope Transmission Project (Segments 1, 2, and 3) that are identified as part of this comprehensive transmission development plan would result in greater short-term (e.g., noise, traffic, air quality, soil erosion) and long-term (e.g., visual/aesthetic) cumulative effects in applicable portions of the counties of Los Angeles, Kern, Tulare, Fresno, and possibly other counties north of Fresno. Potential T/L facilities associated with the possible future SCE/PG&E system intertie project are shown on Figure 7-2. The final details and components of this potential future project are considered to be speculative at this point in time.