

## 9. Alternative 5 (Partial Underground): Impacts and Mitigation Measures

The following section describes visual resource impacts of Alternative 5, the Partial Underground Alternative. This alternative would utilize Gas-Insulated Lines (GIL) technology to place the proposed overhead lines underground along Segment 8A through residential areas of the City of Chino Hills. Alternative 5 would shift from overhead to underground at approximately S8A MP 21.9 and would continue underground through the City of Chino Hills to approximately S8A MP 25.8, where the underground line would shift back to overhead, a distance of approximately four miles. As described in Section 1.2.5, Alternative 5 is identical to Alternative 2 in all respects except for this four mile portion of Segment 8A in the South Area. For all other locations, Alternative 5 is identical to Alternative 2.

### 9.1 Direct and Indirect Effects Analysis

The significance criteria used to identify impacts to visual resources are introduced in Section 4.1 (Criteria for Determining Impact Significance). Impacts associated with this alternative are presented below under the applicable significance criterion.

#### **Have a substantial adverse effect on the existing landscape character and visual quality of the site and its surroundings (Criterion VIS1)**

Impacts associated with Criterion VIS1 for Alternative 5 would be the same as the impacts associated with the proposed Project, except for KOP-South-26 and KOP-South-27, as described and simulated in Figures A-62a through A-63b (see Appendix A). Additionally, the existing un-energized 220-kV transmission line along this 3.6 mile portion would remain in place, instead of being removed, and existing visual conditions would remain in the future in this ROW. Except for this 3.6 mile portion of Segment 8A that would be placed underground, all other portions of Alternative 5 would be identical to the proposed Project (Alternative 2). The impacts and their associated mitigation measures that fall under Criterion VIS1 are summarized below. Please refer to Section 6.1 for a detailed description of these impacts, except for KOPs-South-3.

Following are KOP descriptions relevant to Criterion VIS1 under Alternative 5.

#### **KOP-South-26 – Intersection of Gold Shadow Lane /Avenida Compadres, Chino Hills (Alternative 5, Segment 8A)**

This KOP was established by the visual analysts and is located within a residential neighborhood adjacent to undeveloped land in the western portion of the Landscape Unit 17. It is located just a few blocks west of KOP-South-13. The existing 220-kV transmission tower and conductors are visible on a low skyline ridge approximately 1000 feet to the southeast. Alternative 5 would construct a new transition station at this location, where the 500-kV double circuit transmission line would transition to an underground transmission line. See Figure A-62b in Appendix A for a simulation prepared by the visual analysts of the transition station, based on preliminary engineering data from SCE.

*Overall Visual Change:* *high.* With high visual contrast, high dominance, and high skyline blockage/impairment, the overall visual change would be high.

### **KOP-South-27 – Pipeline Avenue, Chino Hills (Alternative 5, Segment 8A)**

KOP-South-27 was established by the visual analysts on Pipeline Avenue in Chino, just west of Highway 71, looking west at the existing transmission line in Segment 8A. This KOP was selected to represent views for local residents traveling north-south on Pipeline Avenue and for customers of the neighborhood commercial area featuring Bravo Burger, Chino Hills Car Wash and neighborhood convenience stores. This is a typical streetscape view of a four-lane collector street in Chino Hills with an entrance to this convenience commercial development and overhead transmission lines. At this location, Alternative 5 would have a transition station, where the 500-kV double circuit transmission line would come up from underground and continue eastward as an overhead structure. See Figure A-63b in Appendix A for a simulation prepared by the visual analysts, based on preliminary engineering designs by SCE.

*Overall Visual Change: high.* With high visual contrast, high dominance, and high skyline blockage/impairment, the overall visual change would be high. However, the surface features of the ROW would remain unaltered from approximately S8A MP 21.9 to 25.5, except for three small buildings covering ventilation shafts.

Under Alternative 5, visual effects associated with Impact V-1 (Temporary visibility of construction activities and equipment involved with the Project would alter the landscape character and visual quality of landscape views) would be the same as for the proposed Project. Construction impacts on visual resources would result from the presence of equipment, materials, and work force at the two new transition station sites, substation sites, staging areas, pulling locations, tensioner locations, splicing locations, and along the access/ spur roads and overhead transmission line route. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the utility corridor. Vehicles, heavy equipment, helicopters, materials, and workers would be visible during site clearing, grading, substation expansion and construction, structure erection, conductor stringing, cable placement, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the sites and utility corridor including adjacent and nearby residents and recreationists on roads and trails (including the PCT). View durations would vary from brief to extended periods. Construction of the transmission line, construction of the new Whirlwind Substation, expansion and improvements at existing Antelope, Vincent, Gould, Mesa, and Mira Loma Substations, and use of construction staging areas would result in the visual intrusion of construction vehicles, helicopters, equipment, storage materials, and workers.

As for the proposed Project, Impact V-1 for Alternative 5 would require implementation Mitigation Measure V-1, which is fully described in Section 6.1. With implementation of this mitigation measure listed in Section 6.1, the effects of Impact V-1 under Alternative 5 would be reduced somewhat. However, temporary visibility of construction activities and equipment would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 5, visual effects associated with Impact V-2 (For a landscape that currently has no transmission lines, introduction of a new transmission line in a new ROW would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 6.1). Impact V-2 for Alternative 5 would require implementation of Mitigation Measures V-1, V-2a, and V-2b, which are fully described in Section 6.1. Additionally, implementation of Mitigation Measure V-2c (Establish permanent screen) around both new transition stations would substantially reduce visual impacts, but not to less-than-significant levels because of the height of the A-frames and double-circuit towers. With implementation of these mitigation measures, the effects of Impact V-2 of Alternative 5 would be reduced somewhat. However,

the presence of new transmission line structures, conductors, access and spur roads, and new rights of way in landscapes that currently have no transmission line facilities would remain a significant and unavoidable adverse visual impact (Class I).

Under Alternative 5, the effects of Impact V-3 (For a landscape with an existing transmission line, increased structure size and new materials would result in adverse visual effects) would be the same as for the proposed Project (please see Section 6.1). As described in Section 6.1, Impact V-3 would occur throughout the entire Study Area because of increased structure heights and widths, as compared to existing structures and facilities. The effects of Impact V-3 for Alternative 5 would require implementation of Mitigation Measures V-3a (Match spans of existing transmission structures) and V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality), which are fully described in Section 6.1. In addition, the effects of Impact V-3 of Alternative 5 would be somewhat reduced with implementation of Mitigation Measures V-1, V-2a through V-2c, V-4d, and V-4e. However, the presence of newer, taller, wider transmission line structures, new conductors, newly constructed or re-opened access and spur roads, two new transition stations, and enlarged substations would remain a significant adverse visual impact (Class I).

Under Alternative 5, the effects of Impact V-4 (Vegetative clearing and/or earthwork associated with road improvements and pulling/splicing locations would adversely affect landscape character and visual quality) would be the same as for the proposed Project (please see Section 6.1). As described in Section 6.1, Impact V-4 would occur throughout the entire Study Area, and additionally would occur at both West and East Transition Stations in Chino Hills. Impact V-4 for Alternative 5 would require implementation of Mitigation Measures V-4a through V-4d, which are fully described in Section 6.1. The combination of all these mitigation measures would lessen the adverse visual impacts of Alternative 5 and would improve the visual attributes of the affected area. However, the visual impacts associated with Alternative 5 would remain significant and adverse (Class I).

For Alternative 5, locations where the Senior Visual Analyst recommends to the CPUC implementation of these various mitigation measures can be found in Tables 6-5 through 6-9. No further impacts would be introduced by Alternative 5 under Criterion VIS1.

### **Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area (Criterion VIS2)**

Impacts associated with Criterion VIS2 for Alternative 5 would be the same as for the proposed Project (Alternative 2) plus there would be additional light sources at the West and East Transition Stations. Under Alternative 5, the effects associated with Impact V-5 (New metal surfaces associated with transmission infrastructure would potentially reflect sunlight and produce glint and glare in certain lighting conditions) would be exactly the same for the proposed Project (Alternative 2), as described in Section 6.1. Alternative 5 would require implementation of Mitigation Measure V-2b, which is fully described in Section 6.1. Implementation of this measure would reduce adverse visual effects to a level of less than significant (Class II).

### **Substantially damage scenic resources within a scenic highway viewshed or a national scenic trail viewshed (including, but not limited to, trees, rock outcroppings, and historic buildings) (Criterion VIS3)**

Under Alternative 5 the impacts associated with Criterion VIS3 would be the same as for the proposed Project. Alternative 5 would introduce a re-route along Segment 8A that would cross over State Highway 142, an eligible State scenic highway. Under Alternative 5, the visual effects associated with Impact V-6 (The Project

would contribute to the long-term loss or degradation of a scenic highway viewshed or a scenic trail viewshed) would be exactly the same as the proposed Project, plus new impacts to State Highway 142, the Carbon Canyon Road, and all other impacts of Alternative 5 would be identical to Alternative 2 for Criterion VIS3.

Impact V-6 for Alternative 5 would require implementation of Mitigation Measure V-3b (On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality), which is fully described in Section 6.1. With implementation of this mitigation measure, the effects of Impact V-6 would be reduced to a level of less than significant (Class II).

### **Conflict with applicable adopted city, county, State, or federal plans, policies, regulations, or standards applicable to the protection and management of visual quality in the landscape (Criterion VIS4)**

Impacts associated with Criterion VIS4 for Alternative 5 would be identical to the proposed Project. Although this alternative would introduce an underground re-routing along Segment 8A, the re-route would not encounter or impact any different adopted city, county, State, or federal management plans for visual or scenic resources. Therefore, the federal, State and local laws, regulations and standards presented in Tables C-1, C-2, and C-3 of Appendix C would apply.

As discussed for the proposed Project, Alternative 5 would be inconsistent with Standards S9 and S10 of the Forest Plan, and thus would require Project-specific amendments to the Forest Plan. Alternative 5 would also conflict with Goal Visual-1 and Objective Visual-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan. As such, Impact V-7 would be significant and unavoidable (Class I).

## **9.2 Cumulative Effects Analysis**

This section addresses potential cumulative visual effects that would occur as a result of implementation of Alternative 5 (Partial Underground Alternative). This alternative consists of an underground re-routing of the transmission line for a portion of Segment 8A in Chino Hills. The remainder of this alternative would be identical to that of the proposed Project and would, therefore, result in identical impacts. Based on the substantial similarity of Alternative 5 to the proposed Project, this alternative's contribution to cumulative visual impacts would also be identical to that of the proposed Project.

### **9.2.1 Geographic Extent**

Alternative 5 is the exact same geographic location as the proposed Project (Alternative 2); therefore, the geographic extent of the cumulative analysis for Alternative 5 is exactly the same as that for Alternative 2 and would include all of the North, Center, and South Areas.

### **9.2.2 Existing Cumulative Conditions**

The existing cumulative conditions for Alternative 5 are exactly the same as for Alternative 2, as described in Section 6.2.2.

### **9.2.3 Reasonably Foreseeable Future Projects and Changes**

Reasonably foreseeable future projects and changes to the cumulative scenario for Alternative 5 would be exactly the same as Alternative 2, described in Section 6.2.3.

#### **9.2.4 Cumulative Impact Analysis**

Impacts associated with Alternative 5 would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. The minor underground re-routing of the proposed Project transmission line associated with Alternative 5 would not affect the proposed Project's contribution to cumulative impacts. Therefore, cumulative impacts of Alternative 5 would be exactly the same as cumulative impacts for Alternative 2, as described in detail in Section 6.2.4.

#### **9.2.5 Mitigation to Reduce the Project's Contribution to Significant Cumulative Effects**

Mitigation measures introduced for Alternative 2 in Section 6.1 (Direct and Indirect Effects Analysis) would help to reduce this alternative's incremental contribution to cumulative impacts. However, no additional mitigation measures have been identified that would reduce cumulative impacts to a less-than-significant level for visual resources. Cumulative impacts would be significant and unavoidable (Class I).