4.0 Summary of Alternative Screening Results

Proposed alternatives identified by the Applicant (SCE), the EIR/EIS team, public agencies, and the public are listed below in Table 4-1 according to the determination made for EIR/EIS analysis (i.e., whether or not each is analyzed in the EIR/EIS or eliminated from further analysis). Section 3 describes each of the listed alternatives in detail, and presents the rationale for elimination of each alternative that is not analyzed. The table below presents a summary of the conclusions of Section 3, identifying alternatives that were eliminated and those that are carried forward for full EIR/EIS analysis.

Table 4-1. Summary of Alternative Screening Results

Alternative	Retained or Eliminated	Comments / Fatal Flaws
Whirlwind Substation Site A Alternative	Eliminated	Proposed as an aquifer recharge facility resulting in soil stability issues
Whirlwind Substation Site B Alternative	Eliminated	Located on previously undisturbed land; Requires substantially more grading , increasing potential for biological impacts
Upgrade Transmission Through ANF in Segment 6 Only Alternative	Eliminated	Does not meet CAISO/NERC/WECC requirements and is therefore legally infeasible
Upgrade Transmission Through ANF in Segment 11 Only Alternative	Eliminated	Requires new east-west corridor paralleling the Sierra Madre Fault resulting in potentially significant land use and geotechnical impacts
Reduced Upgrades in Segment 6 Alternative	Eliminated	Does not meet basic objectives/purpose and need of the TRTP as the Antelope-Mesa 220-kV T/L, which is a choke point in the transmission system, is not replaced
Co-Locate All SCE T/Ls in Either Segment 6 or 11 Across the ANF Alternative	Eliminated	Does not meet CAISO/NERC/WECC requirements and is therefore legally infeasible
Reduced Number of 220-kV T/Ls in the ANF Alternative	Eliminated	Schedule for upgrades to substations (4 to 5 years) prevents compliance with the Renewables Portfolio Standard; Results in greater construction impacts as a result of additional activities to remove 220-kV T/Ls in Segment 6 and 11; Feasibility of construction in Segment 11 south of Gould unknown
Minimize 500-kV Upgrades Alternative	Eliminated	Does not meet basic objectives/purpose and need of the TRTP as the transmission system would not be designed to allow for future increases in voltage operation from 220 kV to 500 kV preventing the reliable interconnection of the full 4,500 MW
Segments 6 and 11 Double-Circuit Structures Alternative	Eliminated	Requires a new double-circuit structure family to be developed, where the reliability and feasibility of these structures is unknown; results in a less reliable design as failure of a single tower would result in the loss of two T/Ls rather than one, and the potential for such a loss is greater within the ANF due to the extreme weather conditions; new towers would be bulkier and taller (depending on terrain) and would result in a greater potential for skylined conditions; would require additional intermediate towers; may require the placement of towers outside of the existing ROW to circumvent large valleys; fire safety issues may increase as it may be necessary to locate the new towers along ridge tops to circumvent the large valleys; may result in the need for even more additional towers along the existing adjacent lines for clearance purposes; may result in the need for additional towers along the existing adjacent lines for clearance; may not be feasible to construct by helicopter, resulting in the need for additional access roads; and results in increased environmental impacts associated with the removal of the existing 220-kV structures that would otherwise be untouched
Segments 7/8A Single-Circuit 500-kV Structures Alternative	Eliminated	Would require expansion of the existing ROW in Segment 7, which is not viable due to existing infrastructure (San Gabriel River and 605 Freeway), rendering this alternative infeasible

Table 4-1. Summary of Alternative Screening Results

Alternative	Retained or Eliminated	Comments / Fatal Flaws
Partial Underground Alternative	**Retained**	Reduces potentially significant visual impacts in the City of Chino Hills
Partial Composite Core Conductor Alternative	Eliminated	Limits system capacity such that the objectives/purpose and need of the TRTP are not met; does not reduce significant impacts, except slightly for visual resources
Segment 10A Route Alternative	Eliminated	Would not offer any substantial or noticeable improvement over the proposed route and is longer
Segment 10B Route Alternative	Eliminated	Would not offer any substantial or noticeable improvement over the proposed route and is longer
Windhub Substation to Cottonwind Substation to Whirlwind Station Alternative	Eliminated	Requires new 25-mile, 200-foot-wide corridor along the foothills of the Tehachapi Mountain Range resulting in greater impacts (air quality, biology, noise, traffic, water, visual); potentially interferes with wind generation projects planned in the area
Whirlwind Substation to Antelope Substation Alternative	Eliminated	Establishes a new transmission corridor which would result in a longer alignment and greater impacts (air quality, biology, land use, noise, and visual)
Antelope Substation to Vincent Substation Alternative	Eliminated	Establishes a new transmission corridor which would result in a longer alignment and greater impacts (air quality, biology, land use, noise, and visual)
Use LADWP Transmission Corridor through the ANF Alternative	Eliminated	Establishes a new transmission corridor which would result in a longer alignment and greater impacts (air quality, biology, land use, noise, and visual)
New SCE Corridor Across the ANF Alternative	Eliminated	Establishes a new transmission corridor which would result in a longer alignment and greater impacts (air quality, biology, land use, noise, and visual)
New Corridor along Highway 14 Alternative	Eliminated	Establishes a new transmission corridor which would result in a longer alignment and greater impacts (air quality, biology, land use, noise, and visual)
New Corridor through Cajon Pass Alternative	Eliminated	Establishes a new transmission corridor which would result in a longer alignment and greater impacts (air quality, biology, land use, noise, and visual)
West Lancaster Alternative	**Retained**	Minimizes disturbance to current residences and access to properties along 110th Street West
Chino Hills Route A Alternative	**Retained**	Potentially reduces construction impacts (air quality and biology) and long-term visual impacts to the residences of Chino Hills, Chino, and Ontario as a result of shortening the overall route by approximately 9.8 miles
Chino Hills Route B Alternative	**Retained**	Potentially reduces construction impacts (air quality and biology) and long-term visual impacts to the residences of Chino Hills, Chino, and Ontario as a result of shortening the overall route by approximately 7.4 miles
Chino Hills Route C Alternative	**Retained**	Potentially reduces construction impacts (air quality and biology) and long-term visual impacts to the residences of Chino Hills, Chino, and Ontario as a result of shortening the overall route, results in a net decrease of 1.7 miles of 220-kV T/L within CHSP, and reduces existing T/L impacts on the Water Canyon Preserve within CHSP
Chino Hills Route D Alternative	**Retained**	Potentially reduces construction impacts (air quality and biology) and long-term visual impacts to the residences of Chino Hills, Chino, and Ontario as a result of shortening the overall route by approximately 6.4 miles, and would result in the least amount of new double-circuit 500-kV T/L within CHSP (1.3 miles) compared to the other Chino Hills routing alternatives (Routes A to C)
San Gabriel Valley New Corridor Alternative	Eliminated	Requires new 20-mile, 200-foot-wide corridor along the foothills of the San Gabriel Mountains resulting in greater impacts (air quality, biology, land use, noise, traffic, and visual).
Transmission Lines to Midway Substation Alternative	Eliminated	Requires 76 miles of new ROW between Whirlwind and Midway Substations and would likely result in the need for extensive additional (undefined) upgrades with the PG&E transmission system

Table 4-1. Summary of Alternative Screening Results		
Alternative	**Retained or Eliminated**	**Comments / Fatal Flaws**
Non-Transmission System Alternative	Eliminated	Does not meet basic objectives/purpose and need of the TRTP as SCE is obligated to interconnect and integrate power generation facilities such as those in the TWRA into its electrical system