

**Describe the history of the TRTP including the background and purpose for TRTP and its final determination to have the power lines located near homes in Chino Hills.**

Background

The need for the TRTP arose from the mandates of the California Renewables Portfolio Standard (RPS), which requires investor-owned utilities to procure 20 percent of their total retail sales from renewable energy resources by 2010. However, in support of a more aggressive RPS goal of 33 percent renewable energy by the year 2020, Executive Order S-14-08 (issued November 17, 2008) included goals to identify transmission requirements necessary to achieve a renewable energy supply of 33 percent by the year 2020. The RPS standard for 33 percent of energy from renewable sources by 2020 was enacted by law with the passage of SB X1-2, which was signed by Governor Brown on April 12, 2011.

In order for SCE and other investor-owned utilities to satisfy the RPS target, new transmission facilities are required to interconnect remote areas of high renewable power generation, such as the Tehachapi Wind Resources Area (TWRA), to areas of high load, including portions of the Los Angeles and San Bernardino metropolitan areas that are within the SCE service area. In order to assess the ability of the TWRA to contribute toward meeting the State's mandated RPS goals, the CPUC issued Decision 04-06-010 which ordered the formation of the Tehachapi Collaborative Study Group (TCSG) to develop a comprehensive transmission development plan for wind energy in the TWRA (CPUC, 2004). This decision also required SCE to prepare and file a certificate of public convenience and necessity (CPCN) application for transmission upgrades in coordination with the recommendations of the TCSG (CPUC, 2004).

In conjunction with the TCSG, SCE identified a phased development plan, called the Tehachapi Transmission Project (TTP). The TTP was implemented in separate phases, where the TRTP is Phase 3. The approved Antelope-Pardee 500-kV Transmission Project or Antelope Transmission Project Segment 1 represents Phase 1 of the TTP, while the approved Antelope Transmission Project Segments 2 & 3 represents Phase 2 of the TTP.

Purpose of TRTP

The TRTP's three primary objectives are to: (1) Provide the electrical facilities necessary to reliably interconnect and integrate in excess of 700 MW and up to approximately 4,500 MW of new wind generation in the TWRA currently being planned or expected in the future, thereby enabling SCE and other California utilities to comply with the California RPS goals in an expedited manner (i.e., 20 percent renewable energy by year 2010 per California Senate Bill 107); (2) Further address the reliability needs of the California Independent System Operator (CAISO) controlled grid due to projected load growth in the Antelope Valley; and (3) Address the South of Lugo transmission constraints, an ongoing source of concern for the Los Angeles Basin.

The CPUC assessed the purpose and need for the TRTP independent of SCE's application filings. Relevant documents issued by the CAISO, California Energy Commission (CEC), and Federal Energy Regulatory Commission (FERC) were reviewed to assess whether sufficient documentation exists to support the

need for the TRTP. Based upon the information contained in these documents, it was determined that there is ample support to justify the need for the TRTP.

#### Determination to locate near homes in Chino Hills

SCE's CPCN application to the CPUC routed a portion of Segment 8a of TRTP through Chino Hills, taking advantage of an existing transmission ROW that traverses the city. The CPUC worked diligently to develop and assess alternatives, including a partial underground alternative (through Chino Hills) and various re-routes through Chino Hills State Park (CHSP) as presented by the City of Chino Hills. The EIR prepared by the CPUC presented a clear comparison of these alternatives to SCE's Proposed Project (Alternative 2), and formulated mitigation to reduce the impacts of each of the alternatives. In reaching its decision on the Project, the CPUC considered all information presented in the Final EIR, and information presented during the proceeding, including testimony provided by the City of Chino Hills and the other parties to the proceeding. In addition, public comments, including opposition expressed by Chino Hills residents, were given thoughtful consideration by the CPUC. The CPUC's decision followed a long and extensive investigative process and was based on the results of substantial data collection and analysis. The Commissioners considered a wide range of issues, including technical, environmental, social, and economic factors. As commonly occurs, not everyone agreed with the decision, but it was clearly based on careful consideration of a significant amount of information, analysis, and testimony.

**Provide background on the process used to determine the route of the power lines, including how many alternatives were considered, and the factors considered prior to selecting the final route.**

#### Alternatives Process

To determine the alternatives that would be analyzed in detail in this EIR, an alternatives screening process was completed between October 2007 and June 2008. The results of this process are documented in the Alternatives Screening Report (ASR) provided in Appendix A of the Final EIR. In total, the alternatives screening process resulted in the identification and screening of 29 potential alternatives. The alternatives considered included: (1) design variations to SCE's proposed Project, such as different substation sites, reduced conductor voltage, single-circuit versus double-circuit structures, etc.; (2) minor routing adjustments to SCE's proposed route, such as re-routing Segment 10 along the Los Angeles Aqueduct; (3) entirely different transmission line routes for some segments of the proposed alignment; and (4) alternate system configurations. In addition to the 29 potential alternatives that were evaluated in the ASR, other ideas for potential alternatives were suggested by agencies and the public during the scoping period for the EIR (August-October 2007). Many of these suggestions were conceptual and were not offered as specific alternatives, but rather as ideas to be explored.

Based on the alternatives screening process, three of the alternatives considered in the ASR were carried forward to be analyzed along with the No Project/Action Alternative (Alternative 1) and SCE's proposed Project (Alternative 2). These three alternatives are the West Lancaster Alternative (Alternative 3), Chino Hills Route Alternatives (Alternative 4, Routes A through D), and the Partial Underground Alternative (Alternative 5). Following completion of the ASR, a new alternative was requested by the Forest Service to reduce ground disturbance within the ANF by minimizing new road

construction through the use of helicopter construction, which resulted in the development of the Maximum Helicopter Construction in the ANF Alternative (Alternative 6). A final alternative, the 66-kV Subtransmission Alternative (Alternative 7) was also developed following the completion of the ASR in response to requests from the County of Los Angeles Board of Supervisors and additional input from SCE. Finally, in response to a comment letter on the Draft EIR submitted by the City of Chino Hills, an additional route modification was considered as part of Alternative 4, which is Alternative 4C Modified. In total 31 alternatives were considered.

#### Factors Considered in Selecting the Final Route

In selecting the final project alternative, many factors were considered. In order to meet CEQA's requirement to identify an environmentally superior alternative, the EIR preparers primarily considered those resource/issue areas that have the greatest potential for resulting in long-term, significant impacts, which include visual resources, biological resources, land use, public recreation, noise, and wildfire prevention/suppression. Consideration was also given to community concerns, such as air quality, electrical interference/hazards, and socioeconomics. Impacts associated with construction (i.e., temporary or short-term) or those that are easily mitigated to less-than-significant levels were given consideration, but were considered less important than permanent impacts.

Within Chino Hills, the alternatives to routing the transmission lines along SCE's existing ROW included several routes through CHSP proposed by the City of Chino Hills. While there were originally 4 variations of the 'state park alternative', the one that was given the most attention was the route designated as Alternative 4C (ultimately refined to be Alternative 4C Modified). This alternative route would have situated the necessary electrical switching station on the Aerojet property north of CHSP. While many citizens of Chino Hills preferred the Alternative 4C route, constructing the line to the park and through the park presented various challenges and environmental impacts. For example, the line would have had to depart from the project right-of-way (ROW) west of Chino Hills, make use of new ROW, and cross several areas of sensitive animal and species habitats on its way to and through the park. The line would have to use new ROW to cross private lands that contained hazardous and dangerous materials (Aerojet property). The electrical switching station would have to be located on a side of a hill that would have had to undergo significant engineering to support the structure. The State of California generally encourages the use of existing ROW for new transmission lines over the use of new ROW. This policy is commonly referred to as the Garamendi Principle. The Commission analyzed all the project alternatives, including Alternative 4C, but the Commission ultimately chose the route through the City of Chino Hills after determining that the chosen route caused less of an environmental impact than the alternative routes.

Other factors considered by the CPUC included structure safety, ROW width, electric magnetic fields (EMF), and effects on property values.

**Tower Safety.** The TRTP line being constructed in the ROW through Chino Hills uses two kinds of towers: lattice steel towers (LSTs) and tubular steel poles (TSPs). The TSPs are approximately 198 feet tall. They are mounted on a cement core base that is eight feet wide and extends 50+ feet into the ground. These

poles are designed to meet rigid safety standards to withstand severe stresses caused by weather conditions and earth movements. The CPUC requires that all transmission towers comply with state and federal standards for pole safety. The TRTP transmission towers are in compliance with state and federal laws.

**Use of 150-foot ROW.** SCE's current Transmission Design specifications define the "typical 500-kV ROW" for double-circuit structures as 150 feet (Section 6.1, Line Design, of D-2005-198, Rev. 1). The specifications do not differentiate between residential and non-residential areas with respect to ROW width. Therefore, building the double-circuit 500-kV structures within the existing 150-foot ROW through Chino Hills as part of TRTP would be acceptable and appropriate.

Within the United States, there are many instances of transmission lines located in close proximity to permanent structures, including residences. One specific example occurs within Georgia Power's service territory where there is an existing double-circuit 500-kV transmission line in a 150-foot ROW. The existing 150-foot ROW originally contained a 220-kV transmission line until the early 1980s at which point Georgia Power needed to increase capacity to a new generating station. As a result, in 1988 the 220-kV transmission line was replaced with a double-circuit 500-kV transmission line, utilizing LSTs ranging in height from 130 to 200 feet tall. Land uses along this corridor include a mixture of multi-family residential, where multi-story apartments are located within 75 feet of the ROW centerline; single-family residential, where homes and yards are located at the edge of the ROW; commercial; retail; and rural agriculture.

**Electric and Magnetic Fields.** EMFs are created whenever electricity flows. Although no health impacts from EMFs have been established, the possibility of health impacts cannot be ruled out. As a result, the CPUC requires that all new or rebuilt electrical facilities, including transmission lines, must comply with the Commission's EMF policies by taking no-cost and low-cost steps to reduce EMFs. In general, the farther one is away from the transmission lines the lower the EMFs readings. SCE has taken low-cost steps to reduce EMF readings by configuring the arrangement of cables on the TRTP transmission line to reduce EMFs as much as possible. The CPUC has not received any comments from health agencies indicating that these transmission lines would present a health hazard.

**Effects on Property Values.** Homeowners near TRTP have expressed a concern about the impact of TRTP on property values. While the existence of transmission lines may effect property values, there is not a lot of research or survey data that supports a simple correlation between the existence of a transmission line and property value. A literature review prepared as part of the TRTP's EIR showed that property-specific factors, such as lot size, square footage, traffic and neighborhood features also come into play. It is reasonable to assume that some aspect of Project construction and/or operation and maintenance could potentially affect private property values; however, the effects of transmission lines on property value are generally smaller in comparison to other relevant factors.

**Describe role of state regulators in this process. What factors were considered as the project was developed? Were home values and resident safety taken into account?**

While the TRTP is proposed to integrate new wind generation in the TWRA, the need for this Project arose largely from the mandates of the California Renewables Portfolio Standard (RPS).

CPUC issued Decision 04-06-010 that required SCE to prepare and file a Certificate of Public Convenience and Necessity (CPCN) application for the first phase of Tehachapi transmission upgrades consistent with the its conceptual study and the Tehachapi Collaborative Study Groups (TCSG) recommendation; these transmission upgrades include the Antelope-Pardee 500-kV Transmission Project (Segment 1), Antelope-Vincent (Segment 2), and Antelope-Tehachapi (Segment 2) transmission lines.

According to the CEC's 2005 Integrated Energy Policy Report (IEPR), "California needs major investments in new transmission infrastructure to interconnect with remote renewable resources in the Tehachapi and Imperial Valley areas, without which it will not be able to meet its RPS targets". California RPS targets are required by Public Utilities Code Section 399.14. The IEPR further explains that the "Tehachapi area transmission projects" proposed by SCE, which include the proposed TRTP, are critical in order to facilitate the development of renewable energy resources required by the State RPS targets and recommends that these phases of the TTP should move forward "expeditiously."

See response above regarding factors considered, including safety issues and property values.

**Describe interaction with residents and the City of Chino Hills.**

Only interactions that were part of the EIR process are listed here. Additional interaction occurred as part of the general proceeding.

- CPUC met with representatives from Ontario, Chino, Chino Hills, and Whittier (8/1/07)
- Notice of Preparation (NOP) and notification of public scoping meeting sent to City of Chino Hills and residences located along the alignment (8/31/07)
- Scoping meetings held at the Chino Hills Council Chambers (9/20/07)
- Meeting with Chino Hills State Park, City of Brea, and Orange County at Brea City Hall (10/25/07)
- Discussion of the Chino Hills alternative with State Parks, CPUC Sacramento; Meeting on "connected actions" at CPUC's offices in SF (10/26/07)
- Chino Hills provides a CD of Chino Hills Proposed Routes A-D maps (files dated 11/13/07) and GIS data; Revised Proposed Route C and D maps (files dated 11/21/07); Tract Maps associated with the Chino Hills routes (files dated 11/07/07)
- Based on Chino Hills recommendation for alternative routes through Chino Hills State Park, an additional public meeting was held in Brea, CA (1/17/08)
- City of Chino Hills provided two maps indicating potential revisions to Route C, one moving the switching station north onto the Bonnett property and the other changing the routes for the existing 500-kV lines in/out of the switching station to avoid Raptor Ridge (2/1/08)
- Fax from Brad Torgan, CA Dept. of Parks and Recreation, providing a copy of Chino Hills' 21<sup>st</sup> Century Green Partnership Mitigation and Cost Recovery Plan (9/4/08)
- Notice of Availability (NOA) of the Draft EIR/EIS sent to the City of Chino Hills and residences; advertisements were also placed in the local newspaper (Champion Newspaper) (2/12/09)

- Alternative 4C Modified introduced for the first time in the letter received on the Draft EIR/EIS from Goodin, MacBride, Squeri, Day & Lamprey, LLP (4/6/09)
- A public workshop followed by a public participation hearing held at the City of Chino Hills, Council Chambers (3/19/09)
- Aspen site visit to Aerojet to look at Alt 4C Modified – ran into City of Chino Hills reps (5/5/09)
- Updated Alternative 4C (modified 2) map provided by City of Chino Hills (5/6/09)
- Second site visit to Aerojet to look at Alt 4C Modified (corrected switching station location) 5/14/09.
- Chino Hills provided a DVD of GIS files for Alt 4C Modified (6/5/09)
- Issue Final EIR – Responded to over 3,000 individual comments on the Draft EIR/EIS (10/30/09)

**Was the effect on FHA-insured homes and the ability of future homeowners to obtain FHA insurance considered during the rulemaking process?**

These issues were not discussed in the EIR. Under the California Environmental Quality Act (CEQA), social and economic effects cannot be considered significant, consistent with CEQA's focus on impacts to the physical environment.