3.1 MASTER RESPONSES TO COMMON COMMENTS

This section contains Master Responses to address multiple comments on the same or similar topics. Master Responses provide information in a comprehensive discussion that clarify and elaborate upon, as necessary, the analysis in the Draft Subsequent EIR. Master Responses (referred to as "MR" in this section) address the following topics:

- MR-1: Awareness of the RTRP
- MR-2: Adequacy of the Certified 2013 RTRP EIR
- MR-3: Certified 2013 RTRP EIR Scope Compared to Subsequent EIR Scope
- MR-4: CPUC Decision-Making Process
- MR-5: Aesthetics
- MR-6: Health Risks and Hazards of Transmission Lines
- MR-7: Alternatives Development and Analysis
- MR-8: Jurupa Valley Underground Alternatives
- MR-9: Electric and Magnetic Fields (EMF)
- MR-10: Effects on Property Values and Commercial Development
- MR-11: Environmental Justice

3.1.1 MR-1 Awareness of the RTRP

Overview

Many commenters noted that they were unaware of the Proposed Project when they purchased their home or moved into the area.

Public Noticing

The City of Riverside provided notice to property owners within a 1-mile buffer on either side of the 2013 230-kV transmission alignment as part of public notifications for the certified 2013 RTRP EIR. Notices were distributed:

- 2009 when the Notice of Preparation (NOP) was published
- 2011 when the Draft EIR was published
- 2012 when the Final EIR was published

The CPUC provided notices to property owners within 300 feet of the proposed and revised transmission line routes during the preparation of the Subsequent EIR. The CPUC distributed the following notices:

- 2017 when the NOP was published
- 2018 when the Draft Subsequent EIR was published

• 2018 when the Final Subsequent SEIR was published

Project History

SCE and the City of Riverside's Municipal Utility Department (RPU) jointly planned the RTRP. The RTRP would be owned and operated by both SCE and RPU. SCE's project elements provide the infrastructure required to deliver electricity to the City of Riverside. RPU's project elements are required to distribute the electricity within the City of Riverside. The timeline presented below provides an overview of the project history since 2006. The CPUC's Initial Study Checklist provides a detailed description of the project history prior to the preparation of the Draft Subsequent EIR.

Figure 3.1-1 provides a project timeline that identifies all public notices that were distributed during the environmental review process.

Figure 3.1-1 Project Timeline

RTRP TIMELINE



3.1.2 MR-2 Adequacy of the Certified 2013 RTRP EIR

Overview

Many commenters expressed concerns regarding impacts of the overhead transmission line along the south side of the Santa Ana River corridor through the City of Riverside, City of Norco, and Hidden Valley Wildlife Preserve, as well as the overhead transmission line east of I-15 through the City of Jurupa Valley. Questions about the adequacy of the analysis in the certified 2013 RTRP EIR due to the age of the document as well as the adequacy of the analysis in the Subsequent EIR due to the refined scope of the Revised Project were also submitted by commenters.

CEQA Guidelines for Subsequent EIRs

CEQA Guidelines state that a Subsequent EIR should be prepared when a new significant environmental effect or a substantial increase in severity of a previously identified significant effect would result from substantial changes proposed in a project or when substantial changes with respect to the circumstances under which the project is undertaken have occurred (Section 15162[a]). Case law has further clarified that the purpose of a Subsequent EIR "...is to explore environmental impacts not considered in the original environmental document..." and that the analysis should focus on the proposed changes to a project, instead of reevaluating all impacts (Save Our Neighborhood v. Lishman [2006] 140 Cal.App.4th at p. 1296; accord, Mani Brothers Real Estate Group v. City of Los Angeles [2007] 153 Cal.App.4th at pp. 1398–1399, and Friends of the College of San Mateo Gardens v. San Mateo Community College District [2016] 1 Cal.App.5th at p. 2). Only the impacts resulting from the Proposed Project changes or change in circumstances not analyzed in the certified 2013 RTRP EIR are at issue and must be evaluated in the Subsequent EIR. Indeed, a current analysis of project components that have not changed since 2013 would result in the same impact conclusion.

Analysis of Overhead Transmission Line Components

The Revised Project Subsequent EIR does not address the transmission line south of the Santa Ana River or to the east of I-15 because these elements were considered by CPUC to have been adequately analyzed in the 2013 RTRP and there are no changed circumstances or new significant impacts that are different from those previously analyzed. The only overhead transmission line components analyzed in the Subsequent EIR are those that have changed or are new since the certified 2013 RTRP EIR. These components include the segment along Wineville Avenue, and the riser poles to the east of I-15 and in Goose Creek Golf Club, as detailed in MR-3 below.

3.1.3 MR-3 Certified 2013 RTRP EIR Scope Compared to Subsequent EIR Scope

Overview

Many commenters expressed confusion regarding or were unaware of what Proposed Project components were analyzed in the Subsequent EIR.

Project Scope Analyzed in the Subsequent EIR

The Subsequent EIR identifies and analyzes modifications to the Proposed Project. Only the impacts resulting from the Proposed Project changes or change in circumstances not analyzed in the certified 2013 RTRP EIR are at issue and therefore must be evaluated in the Subsequent EIR. These changes are referred to as the "Revised Project" in the Subsequent EIR, and include the following components:

- Construction of approximately 2 miles of 230-kV underground double-circuit duct bank, which was previously proposed as overhead transmission line. The underground duct back would be constructed primarily within Pats Ranch Road and 68th Street in the City of Jurupa Valley.
- Relocation of the proposed overhead 230-kV transmission line route to the west side of Wineville Avenue. The purpose of relocating the overhead transmission line is to avoid conflicts with housing developments on the east side of Wineville Avenue.
- Relocation of existing overhead distribution lines to underground duct banks in two locations to accommodate the new 230-kV transmission line.
- Temporary use of a marshalling yard on Etiwanda Avenue to store construction materials during construction.

In addition, the Subsequent EIR identifies changes in environmental circumstances (i.e., regulations and/or baseline conditions) and identifies the Proposed Project components that are affected by the change in circumstance. The changes in circumstance include:

Regulatory

- South Coast Air Quality Management District's 2016 Air Quality Management Plan The certified 2013 RTRP EIR air quality analysis considered the 2012 Air Quality Management Plan. South Coast Air Quality Management District (SCAQMD) adopted the new air quality plan in 2016 and the Proposed Project must now comply with the new air quality regulations.
- California Assembly Bill 52, Native Americans: California Environmental Quality Act –
 Projects for which a Notice of Preparation is prepared after July 1, 2015 are required to
 comply with the requirements of Assembly Bill (AB) 52. The certified 2013 RTRP EIR did
 not include analysis of Tribal Cultural Resources pursuant to AB 52.

Physical

- New entitled developments (Lennar of California, Inc., Homes Riverbend Community; Vernola Trust, Marketplace Apartment Community; William Lyon Homes, The Crossing at TurnLeaf; and Barrington Place [previously Harmony Trails Subdivision])
- New air quality modeling methodology
- Changes in background pollutant concentrations

In accordance with CEQA Guidelines and recent case law, only the Revised Project components and Proposed Project components affected by changes in environmental circumstances were analyzed in the Subsequent EIR.

Project Scope Analyzed in the Certified 2013 RTRP EIR

The remaining, unchanged components of the Proposed Project were adequately analyzed in the certified 2013 RTRP EIR. These components include:

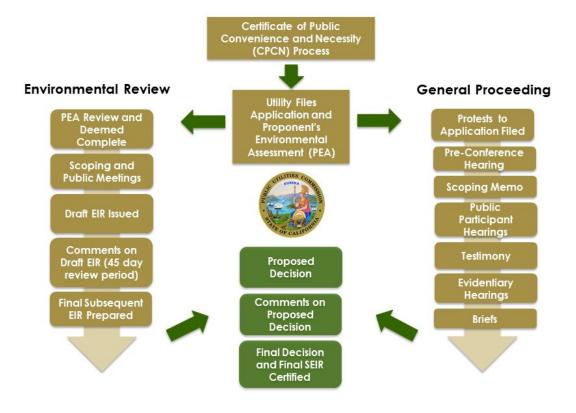
- New 230-kV Wildlife Substation
- Overhead transmission line from Wildlife Substation to Goose Creek Golf Club
- Overhead transmission line to the east of I-15
- Relocation of existing overhead distribution lines at several locations to accommodate the new 230-kV transmission line
- Clay Marshalling Yard

3.1.4 MR-4 CPUC Decision-Making Process

Substantial concern has been raised about the environmental impacts of, as well as strong opposition to, the Proposed Project and Revised Project and support for various alternatives. This response provides details regarding the decision-making process for the CPUC, including the CEQA environmental review process, the CPUC general proceedings, and consideration regarding Proposed Project need.

Figure 3.1-2 below provides an overview of the steps in the CEQA environmental review process and the CPUC general proceeding. The CPUC considers the information produced through the environmental review and general proceeding during the decision-making process.

Figure 3.1-2 Environmental Review and General Proceeding Processes



CPUC CEQA Environmental Review

Southern California Edison (SCE; the Applicant), a regulated California utility, filed an application (A.15-04-013) for a Certificate of Public Convenience and Necessity (CPCN) with the California Public Utilities Commission (CPUC) to construct and operate the Riverside Transmission Reliability Project (RTRP). The application was filed on April 15, 2015, and an amended application was filed on April 30, 2015. In September 2016, SCE revised the Proposed Project to relocate a portion of the transmission line and to change the design of a segment of the transmission line from overhead to underground. The CPUC reviewed the revised CPCN application and deemed the application complete on January 5, 2017.

The CPUC, as the lead agency under CEQA, determined that the certified 2013 RTRP EIR and a Subsequent EIR, as further described in MR-2, was required for environmental review of the Proposed Project under CEQA. The environmental review process included the following steps consistent with CEQA requirements:

- The CPUC issued a CEQA NOP on January 25, 2017 and mailed scoping notices to individuals, organizations, elected officials, tribes, and federal, state, and local agencies with an interest in the Proposed Project and all property owners within 300 feet of the Proposed Project alignment.
- The scoping period was 30 days between January 25, 2017 and February 24, 2017.
- The CPUC held a scoping meeting on February 8, 2017.
- The CPUC prepared a Draft Subsequent EIR that included an environmental impact analysis for the Revised Project and five alternatives.
- The CPUC defined the environmentally superior alternative, aside from the No Project Alternative, in the Draft Subsequent EIR, as Alternative 1.
- The Draft Subsequent EIR was made available for public comment for a 45-day public review period between April 2, 2018 and May 17, 2018.
- The CPUC held two public workshops in the project area during the public review period on April 24, 2018 and April 25, 2018.

This Final Subsequent EIR contains:

- All revisions made to the Draft Subsequent EIR.
- All comments and recommendations received on the Draft Subsequent EIR.
- A list of persons, organizations, and public agencies that commented on the Draft Subsequent EIR.
- Responses of the CPUC to significant environmental points raised in the public comment process.

The CPUC must consider the environmental evaluation of the Proposed Project in their decision-making process and must certify the Subsequent EIR prior to approving the Proposed Project or an alternative. The environmental evaluation includes the Draft Subsequent EIR and this Final Subsequent EIR.

The Final Subsequent EIR is an informational document. It does not make a recommendation regarding approval or denial of the CPCN application, and it does not establish a route for the project.

In making a final determination on the application, the Commission will consider the information contained in the certified 2013 RTRP EIR and the Final Subsequent EIR, as well as in the formal evidentiary record. The analysis in this Subsequent EIR does not evaluate impacts on property values or other aspects unrelated to the environment (refer to MR-10). The consideration of other decision factors considered in the CPUC general proceeding is discussed below.

CPUC General Proceeding

The CPUC general proceeding is a formal review process in which the CPUC considers how approval of a project might impact public interests. The general proceeding includes, as stated in Public Utilities Code § 1002.3, the consideration of "cost-effective alternatives to transmission facilities that meet the need for an efficient, reliable, and affordable supply of electricity." A general proceeding can include pre-hearing conferences, evidentiary hearings, and public participation hearings. The CPUC will seek a decision on the project that strikes a balance among power production, land use, environmental stewardship, and other factors. A CPUC-Assigned Commissioner and an Administrative Law Judge (ALJ) are in charge of the general proceeding, which may occur in part while the environmental review is underway.

Pre-hearing Conference

The pre-hearing conference is the first open forum in the general proceeding. Its purpose is to determine the potentially affected parties, specific project issues, and to develop a preliminary filing and hearing schedule. After the conference, the ALJ issues a scoping memo that lists the issues raised during the pre-hearing conference and a schedule for addressing these issues in the general proceeding.

Evidentiary Hearings

The evidentiary hearings, similar to formal courtroom proceedings, offer stakeholders and qualified experts the opportunity to present their opinions on various aspects of a project, including need and cost-benefit of the project. After giving expert testimony, the witnesses are offered for cross-examination by other participants in the proceeding. The purpose of the evidentiary hearings is to gather evidence so that the ALJ and the CPUC-Assigned Commissioner fully understand the issues of the case. The ALJ determines the range of topics covered in the evidentiary hearings, which are project specific. Topics considered in evidentiary hearings may generally include:

- Economic and reliability need for the Proposed Project
- Alternatives to the Proposed Project
- Feasibility and impacts of pursuing the No Project Alternative
- Community values
- Recreational areas
- Historical and aesthetic values

Public Participation Hearings

The CPUC-Assigned Commissioner and the ALJ may hold public participation hearings if there is sufficient public interest. During the hearings, the general public may provide perspectives on the Proposed Project or alternatives including, but not limited to, concerns raised in comment letters on the 2013 RTRP Draft EIR and Draft Subsequent EIR such as impacts on community welfare, property values, economy of the affected communities, and rate payers. Each participant is given an opportunity to speak, though each individual's time may be limited to ensure that all attendees are given a chance to voice their opinions and concerns.

Need for the Project

SCE explained in its CPCN application that the purpose of the Proposed Project is to provide RPU and its customers with adequate transmission capacity to serve existing and projected load, to provide for long-term system capacity for load growth, and to provide needed system reliability. SCE has identified the following objectives of the Proposed Project:

- 1. **Increased capacity.** Increase capacity to meet existing electric system demand and anticipated future load growth
- Additional delivery point. Provide an additional point of delivery for bulk power into the RPU electrical system, thereby reducing dependence on Vista Substation and increasing overall reliability

The need for the project is not evaluated in an EIR and is not determined within the context of the environmental review process. The CPUC ALJ evaluates project need during the CPUC general proceeding with information presented by SCE and other parties. CPUC General Order 131-D contains rules relating to the planning and construction of electric facilities. It prescribes that, prior to issuing a CPCN, the CPUC must find that the project is necessary to promote the safety, health, comfort, and convenience of the public.

Cost of the Project

The cost of the Proposed Project or an alternative is not evaluated or decided within the certified 2013 RTRP EIR or Subsequent EIR. CEQA does not require consideration of economic effects unless they would result in physical changes to the environment (CEQA Guidelines Section 15131). The CPUC ALJ evaluates the cost of the project during the CPUC general proceeding with information presented by SCE and other parties, as described above.

CPUC Decision Process

The ALJ will prepare a Proposed Decision for consideration by the CPUC Commissioners after both the environmental evaluation and CPUC general proceeding are complete. The ALJ bases the Proposed Decision on the evidence presented at the general proceeding, the analysis and conclusions made in the 2013 RTRP Final EIR or Final Subsequent EIR, and the public comments received. The Proposed Project, No Project Alternative, project alternatives, and combinations of alternatives will be considered for adoption during the CPUC decision-making process. After the Proposed Decision has been issued, each Commissioner may draft an Alternate Decision presenting differing conclusions or opinions.

Before approving the Proposed Project or an alternative, the CPUC needs to adopt the certified 2013 RTRP EIR and certify the Subsequent EIR, and make the following findings regarding the two EIRs:

- Have been completed in compliance with CEQA,
- Were presented to its decision-making body, and the decision-making body reviewed and considered the information contained in the 2013 RTRP EIR and Subsequent EIR, and
- Reflect the independent judgment of the CPUC, in compliance with CEQA Guidelines Section 15090.

All five CPUC Commissioners will vote on the Proposed Decision and any Alternate Decisions at a meeting of the full Commission. If the CPUC approves the Proposed Project or an alternative that will have a significant effect on the environment, the CPUC will make one or more of the findings required by CEQA Guidelines Section 15091 for each significant environmental effect identified in the certified 2013 RTRP EIR and Subsequent EIR. In compliance with CEQA Guidelines Section 15093, if the Proposed Project or alternative to be adopted would result in a significant unavoidable effect or effects, the CPUC will also adopt a statement of overriding considerations to explain why specific economic, legal, social, technological or other benefits of the proposal outweigh the effect(s), citing specific evidence in the certified 2013 RTRP EIR and Subsequent EIR and/or elsewhere in the record. If the Proposed Project or an alternative is approved, the CPUC will adopt a mitigation monitoring and reporting program (MMRP) to ensure that the mitigation measures identified in the certified 2013 RTRP EIR and Subsequent EIR are implemented.

The CPUC's approval of the Proposed Project or an alternative may be appealed internally at the CPUC through the following process:

- Within 30 days of the approval of the Proposed Project or an alternative, an
 application for rehearing may be filed with the CPUC (Public Utilities
 Code § 1731[d]). The purpose of the rehearing application is to alert the CPUC to a
 legal error so that the CPUC may correct it.
- Within 20 days from the filing of the application for rehearing, the CPUC shall issue its decision and order on the rehearing (Public Utilities Code § 1731[c]).

Pursuant to PRC § 21168.6, any judicial action challenging a CPUC CEQA decision must be filed with the Supreme Court of California. Filing and processing of judicial review is governed by Public Utilities Code § 1756–1768.

Public Participation in the CPUC General Proceeding

Overview

There are several ways the public can participate in the CPUC general proceeding. Members of the public may provide comments by speaking at a voting meeting, attending a public participation meeting, or writing to the Public Advisor's Office.

The CPUC prepared guidance entitled "Providing Public Comments to the CPUC" and "How to Become a Party to a Proceeding" to inform the public how they may be involved in the CPUC general proceeding (CPUC, 2018). These guidance documents can be found at the following website:

http://www.cpuc.ca.gov/pao/

Informal Participation

Comments provided at CPUC meetings scheduled to received public comment and those provided to the Public Advisor's Office, are informal comments. These comments are included in the proceedings and made available to the CPUC decision-makers, but are not considered evidence in the proceedings. The Public Advisor's Office is also available to answer questions regarding the proceeding process. The Public Advisor's Office may be contacted via the following contact information:

Telephone: (866) 849-8390

Email: public.advisor@cpuc.ca.gov Mailing address: CPUC Public Advisor's Office

505 Van Ness Avenue, Room 2103

San Francisco, CA 94102

Formal Participation

Members of the public or a group must become a party to become a formal participant in the proceedings. The ALJ may determine whether or not to grant party status based on the information provided by the potential party. The ALJ's considerations may include, but are not limited to:

- Whether the grant of party status will cause a delay in the proceeding
- Whether it will prejudicially protect late entrant from discovery
- Whether the late presentation of factual or legal contentions will prejudice existing parties
- Whether there is good cause for the person's failure to participate in a timelier fashion

The party, if granted status, has rights, responsibilities, and obligations including providing testimony and cross-examining witnesses. If party status is not granted, the ALJ may limit participation or place the person on the Information-Only portion of the service list, and they will receive all documents included in the project proceeding via email.

Other Project Approvals

The certified 2013 RTRP EIR and Subsequent EIR provide a list of permits and approvals that may be required for the Proposed Project. Several other State agencies may rely on the information in this Final Subsequent EIR to inform their decisions over issuance of specific permits related to project construction, operation, and maintenance. The California Department of Fish and Wildlife (CDFW) is a State Trustee Agency. The Santa Ana Regional Water Quality Control Board (RWQCB) is a State Responsible Agency because it would issue discretionary

permits for the project. Other agencies may impose additional conditions or requirements on SCE as part of their separate permit review and approval processes.

3.1.5 MR-5 Aesthetics

Several commenters expressed concern regarding the aesthetic impacts of the overhead transmission line portion of the Revised Project.

The impact on the visual character of the surrounding areas from construction and operation of the overhead transmission line was analyzed in the Subsequent EIR. Installation of the riser poles and overhead 230-kV transmission line would degrade the scenic quality of views from local roadways, parks, and recreational areas resulting in long-term impacts on aesthetics. Mitigation options, such as vegetative screening or color treatment of facilities, are either infeasible or have the potential to cause greater contrast with existing transmission infrastructure. Long-term visual impacts would remain significant and unavoidable.

3.1.6 MR-6 Health Risks and Hazards of Transmission Lines

Overview

Many commenters expressed concerns regarding the health risks, and fire and shock hazards related to construction and operation of transmission lines. Air pollutants, which would be emitted during construction of the Revised Project, are known to be hazardous to human health. An analysis of the impact on sensitive receptors from construction emissions is presented in Section 4.3: Air Quality and Greenhouse Gas Emissions of the Subsequent EIR. Electrical and magnetic fields (EMF) are addressed in MR-9. Fire hazards were addressed in the certified 2013 RTRP EIR. The CPUC considers the risk of shock hazard on workers and the public to be an environmental issue in the context of CEQA. A detailed shock hazard analysis is presented in Section 4.7: Hazards and Hazardous Materials of the Subsequent EIR. A summary of the potential risks and associated mitigation is provided below.

Air Pollutants

Construction of the Revised Project would generate localized emissions in proximity to sensitive receptors. Air pollutants have the potential to cause health effects. Ambient air quality concentrations from construction emissions were modeled at sensitive receptor locations close to underground and overhead construction activities. Ambient pollutant concentrations of nitrogen dioxide and particulate matter less than 2.5 and up to 10 micrometers in size would exceed the SCAQMD significance thresholds. The sensitive receptors closest to underground construction of the 230-kV transmission line, located approximately 30 feet away, would experience the highest ambient pollutant concentrations.

Mitigation measure (MM) AQ-01 requires SCE to prepare and implement a Fugitive Dust Control Plan that includes short- and long-term dust control measures to reduce particulate matter emissions generated during project construction. MM AQ-02 specifies exhaust emissions control requirements for worker vehicles and construction equipment. Ambient pollutant concentrations would be reduced to below the SCAQMD significance thresholds. The impact on

sensitive receptors from exposure to substantial pollutant concentrations would be less than significant with mitigation.

Shock Hazards

Section 4.7: Hazards and Hazardous Materials of this Subsequent EIR addresses the potential for shock hazards that could be caused by the Revised Project, including:

- Induced current
- Ground faults
- Electric arc

Potential for Shock Hazard from the Revised Project

Transmission lines are designed to withstand high winds. Conductor phases are spaced to allow adequate "blow out" room to ensure that the conductors do not make contact with each other or surrounding trees and infrastructure. If a transmission structure were to be blown over, the protection system of the line would shut off power flow in a fraction of a second. Risk of shock hazard from a downed line would be very low. Regular maintenance would limit the shock risk from corrosion, loose fittings, and other factors that could increase the chance of downed equipment and shock hazard. Cleaning insulators, which is a part of regular maintenance activities, would minimize the risk from pollution buildup.

As described in Section 4.7: Hazards and Hazardous Materials of this Subsequent EIR, the Revised Project components could induce current and voltage of existing conductive objects, including metallic underground utilities, within or in close proximity to the Revised Project transmission corridor. Shocks could occur if a person or animal touches an ungrounded conductive object near the Revised Project transmission line during operation. Impacts on workers and the public could be potentially significant if the touch voltage exceeds 25 volts to ground under normal and emergency operating conditions, or more stringent safety thresholds.

MM HAZ-05 requires SCE to identify the location and type of existing conducting objects near the transmission line corridor and evaluate and document their proximity. SCE would model the induced voltages from the Revised Project's transmission line on the identified conductive object under both steady-state and fault conditions. In the event that the modeled induced voltage of a conductive objective exceeds maximum touch voltage thresholds, SCE would be required to incorporate grounding or other measures into the design features in order to reduce the touch voltage under steady-state and fault conditions to below threshold levels. The impact on the public from excessive shock hazard was analyzed to be less than significant with mitigation (refer to Section 4.7: Hazards and Hazardous Materials of this Subsequent EIR).

Fire Hazards

Construction activities that could result in a wildland fire include operation of construction equipment with combustion engines, operation of rock-striking equipment, and worker smoking. Sparks from construction equipment or improper disposal of cigarettes could ignite a fire, which could escape initial attack containment and become a catastrophic fire, particularly in areas with heavy fire fuels and high exposure to Santa Ana winds.

The earlier PRC includes the following statutory sections that govern fire safety that restrict the use of equipment that may produce a spark, flame, or fire:

- Require spark arrestors on construction equipment that use internal combustion engines
- Specify requirements for the safe use of gasoline-powered tools in fire hazards areas
- Specify suppression equipment that must be provided on site for various types of work in fire-prone areas

The PRC also presents guidelines for minimum clearance requirements around utility poles and transmission lines (PRC § 4296), such as a 10-foot clearance of any tree branches or ground vegetation from around the base of power poles carrying more than 110-kV, and removal of dead, diseased, or dying vegetation that could fall onto lines. Additionally, the County of Riverside, the City of Jurupa Valley, and the City of Riverside have adopted General Plans that include wildfire prevention and response plans in the case of fire outbreak. For a full discussion of the PRC regulations and the requirements of relevant community General Plans concerning fire hazards, refer to Section 4.7.5: Regulatory Setting of the Subsequent EIR. Wildfire hazard was adequately analyzed in Section 3.2.7: Hazards and Hazardous Materials of the certified 2013 RTRP EIR.

In case of a fire outbreak, MM TRANS-06 requires preparation and implementation of traffic control plans that ensure emergency access procedures allow for emergency vehicle passage. Emergency personnel will be notified in advance of any lane or road closures that may affect response time. For more information regarding traffic control plans, refer to Section 4.13: Transportation and Traffic of the Subsequent EIR.

Several commenters raised questions about new CPUC fire-safety regulations and requested a new analysis of the 230-kV transmission line in light of these new regulations. The CPUC initiated Rule (R.) 15-05-006 in May 2015, which identified three goals:

- Develop and adopt a statewide fire-threat map that delineates the boundaries of a new High Fire-Threat District (HFTD) where the previously adopted regulations will apply,
- 2. Determine the need for additional fire-safety regulations in the HFTD, and
- 3. Revise General Order (GO) 95 to include a definition and maps of the HFTD, as well as any new fire-safety regulations.

In December 2017, the CPUC adopted regulations to enhance fire safety in areas designated as HFTDs. The new regulations were incorporated into GO 95 for the purpose of enhancing safety in the HFTD. In January 2018, the CPUC adopted the final CPUC Fire-Threat Map, which consists of three tiers:

 Tier 1 High Hazard Zones on the U.S. Forest Service-California Department of Forestry and Fire Protection (CAL FIRE) joint map of Tree Mortality High Hazard Zones

- Tier 2 of the CPUC Fire-Threat Map where there is an elevated risk for utilityassociated wildfires
- Tier 3 of the CPUC Fire-Threat Map where there is an extreme risk for utilityassociated wildfires

The 230-kV transmission line traverses the boundary of a Tier 2 HFTD south of the Hidden Valley Wildlife Preserve. Within Tier 2 areas, GO 95 now requires stricter fire-safety measures related to corrections of safety hazards, vegetation clearance requirements, facility inspections, and the annual preparation of a fire prevention plan. SCE is required by law to adhere to GO 95. Additionally, MM HAZ-03 from the certified 2013 RTRP EIR requires the preparation of a Fire Prevention and Management Plan and would ensure that project construction complies with the applicable fire regulations, including GO 95. The CPUC's new fire regulations would further increase fire-safety in the project area and the impact would remain less than significant. Additional analysis of fire hazards related to the 230-kV transmission line and Revised Project is not required.

3.1.7 MR-7 Development, Screening, and Analysis of Alternatives

Overview

Many commenters expressed support for alternatives analyzed in the Subsequent EIR or questioned why a certain alternative was not analyzed or identified in the Draft Subsequent EIR as environmentally superior.

Summary of Alternatives Screened

An Alternatives Screening Report (Appendix D) was prepared to determine if alternatives to the Revised or Proposed Project could meet the project objectives and reduce or eliminate significant effects. Alternatives considered in the Alternatives Screening Report include:

- Alternatives considered in the certified 2013 RTRP EIR
- Alternatives proposed by SCE in the application for a CPCN
- Alternatives suggested by the public during scoping
- Alternatives developed by SCE and RPU in response to CPUC request for consideration of lower voltage alternatives
- Other potentially feasible alternatives capable of meeting the project objective as developed by the CPUC CEQA Team

A range of 31 alternatives were identified and screened based on three criteria. Each alternative was evaluated to determine whether it met the basic project objectives, is potentially feasible, and avoids or reduces significant environmental impacts.

A number of alternatives mentioned by commenters, including avoiding the City of Jurupa Valley and using rooftop-solar energy in the City of Riverside, were evaluated in the Alternatives Screening Report. The CPUC considered several alternative routes that would

avoid the City of Jurupa Valley or entirely avoid construction of a transmission line. These alternatives included:

- Distributed rooftop solar
- Adding battery storage facilities at existing substations
- Expansion of the Riverside Energy Resource Center
- Expansion of the Electrical Equipment at Mountain View Substation
- Using RPU existing generation during peak periods
- Increasing energy efficiency and conservation
- Reducing demand/electricity use during peak periods
- Using SCE's existing 66-kV powerline network to provide power to Riverside

Alternatives Suggested by Commenters

A brief summary of alternatives specifically mentioned by commenters, that were identified and screened in the Subsequent EIR and the Alternatives Screening Report (Appendix D), and why they were not fully evaluated in the Subsequent EIR, is provided here. Further details are provided in Chapter 3: Alternatives and Appendix D.

Avoidance of the City of Jurupa Valley Alternatives

The CPUC screened 20 alternatives (Alternatives 7 through 26) that would avoid Jurupa Valley. These alternatives included non-wire alternatives as well as routing alternatives. Public comments related to avoiding Jurupa Valley focused on two routing alternatives: Alternative 7 and Alternative 12. Alternative 7: Eastern Alignment in Riverside, would involve routing the transmission line to follow the Santa Ana River for approximately 8 miles from the Wildlife Substation to the existing Mira Loma – Vista #1 230-kV Transmission Line northeast of the City of Jurupa Valley. This alternative would result in more significant impacts than the Revised Project and would reduce significant and unavoidable impacts in Jurupa Valley, but would instead relocate impacts to a different community.

Alternative 12: Mount View Substation – Mira Loma-Vista Interconnect, often referred to as the "Agua Mansa Alternative," would involve routing the transmission line southwest from the tie-in at Mira Loma – Vista #1 230-kV Transmission Line, to Agua Mansa Road and Market Street, and then travel along various roads to the Mountain View Substation. This alternative may not be feasible, because adequate space is not available at Mountain View Station for 230-kV substation equipment. Impacts would not be avoided but would be relocated and may be greater than the Revised Project.

Rooftop Solar Alternative

Alternative 21: Distributed Generation, would involve deployment of distributed (less than 20 MW) renewable energy projects within the City of Riverside. Distributed renewable generation includes rooftop solar panels. This alternative did not meet the project objectives because it would not provide a second source of bulk power delivery to Riverside or sufficient power to meet demand and projected load growth.

Alternative 6: Mira Loma Substation - Van Buren in Railroad ROW

Alternative 6 involves construction of the transmission line along Van Buren Boulevard, within the Union Pacific Railroad ROW. This alternative did not meet the feasibility criteria due to the likelihood of induced current effects on the railroad. In addition, neither SCE or Union Pacific permits transmission lines in railroad ROW.

Alternatives Considered in the Subsequent EIR

Many commenters expressed support for the No Project Alternative, an unspecified underground alternative, or one of the underground alternatives analyzed in the Subsequent EIR. The Subsequent EIR identified four underground alternatives that would reduce or avoid significant impacts caused by the Revised Project. CEQA requires consideration of the effects of not implementing a project, known as the No Project Alternative, although this alternative would not meet any of the project objectives. A summary of the alternatives analyzed in the Subsequent EIR is shown in Table 3.1-1.

Table 3.1-1 Alternatives Analyzed in the Subsequent EIR

Alternative	Description
Alternative 1: Bellegrave – Pats Ranch Road Underground	Replaces the overhead transmission line between Cantu-Galleano Ranch Road and Limonite Avenue with an underground transmission line within the streets of Wineville Avenue, Bellegrave Avenue, and Pats Ranch Road
Alternative 2: Wineville – Limonite Underground	Replaces the overhead transmission line between Cantu-Galleano Ranch Road and Limonite Avenue with an underground transmission line within the streets of Wineville Avenue and Limonite Avenue
Alternative 3: Relocate Northern Riser Poles	Replaces the overhead transmission line between Cantu-Galleano Ranch Road and Limonite Avenue with an underground transmission line within the streets of Wineville Avenue and Limonite Avenue
Alternative 4: Wineville – Landon Underground	Replaces the overhead transmission line between Cantu-Galleano Ranch Road and I-15 with an underground transmission line within the streets of Wineville Avenue and Landon Drive. At the terminus of Landon Drive, the transmission line would transition back to overhead and follow the proposed project alignment along I-15
No Project Alternative	It is likely that RPU would opt to increase use of gas-fired generation and install battery storage to mitigate the system impact from potential failure of RPU's transformers at Vista Substation, or failure of RPU's transmission line interconnections to Vista Substation

Each of these alternatives was analyzed at the same level as the Revised Project in each environmental resource section. Chapter 6: Comparison of Alternatives provides a detailed comparison of the impacts found for each alternative, and the alternatives were ranked accordingly.

The No Project Alternative was found to be the environmentally superior alternative by avoiding the significant and unavoidable Revised Projects impacts on aesthetics, agricultural resources, noise, and traffic. CEQA requires identification of an environmentally superior alternative among the remaining alternatives when the Environmentally Superior Alternative is the No Project Alternative. Alternative 1 would avoid all long-term significant and unavoidable impacts on aesthetics and important farmland by locating the transmission line underground in Pats Ranch Road and would have fewer significant and unavoidable impacts than other alternatives. The significant and unavoidable temporary construction-related noise and traffic impacts would remain, but these impacts would be short-term and would cease after construction is complete in an area. Aside from the No Project Alternative, Alternative 1 is the environmentally superior alternative.

3.1.8 MR-8 Jurupa Valley Underground Alternatives

Overview

Many commenters expressed preference for undergrounding all of the transmission line in the City of Jurupa Valley in their comments. The following list summarizes the reasons commenters prefer underground alternatives:

- Reduces impacts on aesthetics resources in general
- Reduces impacts on property values and economic development in general
- Reduces health impacts in general
- Reduces health impacts by reducing EMF

Screened Alternatives

The CPUC considered four alternatives that involve a full underground alignment in the City of Jurupa Valley, including Alternatives 1, 2, 5, and 8. Two of the full underground alternatives, Alternative 1 and Alternative 2, met project objectives, all feasibility criteria, and reduced or avoided impacts of the Revised Project.

Analyzed Alternatives

Alternative 1 involves construction of an underground transmission line within the streets of Wineville Avenue, Bellegrave Avenue, and Pats Ranch Road. At the intersection of Pats Ranch Road and Limonite Avenue, the alternative route would connect with and follow the same underground alignment as the Revised Project. Alternative 1 would offer substantial avoidance of visual effects and permanent agricultural resources impacts in the City of Jurupa Valley.

Alternative 2 involves construction of an underground transmission line within the streets of Wineville Avenue and Limonite Avenue. The alternative route would connect and follow the same underground alignment as the Revised Project at the intersection of Limonite Avenue and Pats Ranch Road. Alternative 2 would substantially avoid visual effects and agricultural land use conflicts in the City of Jurupa Valley.

These underground alternatives are detailed in Chapter 3 and analyzed in Chapter 4 of the Subsequent EIR. Chapter 3 also includes a summary of the alternatives screening process used

to evaluate all alternatives considered by the CPUC. The CPUC will consider these underground alternatives in their general proceeding on the project.

3.1.9 MR-9 EMF

Overview

Many commenters expressed concerns regarding the health effects of electric and magnetic fields (EMF) on both adults and children.

EMF

CPUC Position

In 1991, the CPUC initiated an investigation into electric and magnetic fields associated with electric power facilities. This investigation explored the approach to potential mitigation measures for reducing public health impacts and possible development of policies, procedures or regulations. The CPUC initiated an investigation into the health risk of EMFs again in 2006 and determined "at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences. The CPUC, in Decisions D.93-11-013 and D.06-01-042, requires regulated utilities to evaluate EMFs from new and upgraded transmission lines and substation projects and implement "no cost" and "low cost" measures to reduce EMFs. Regulated utilities are also required to submit a magnetic field management plan. For further information on scientific studies regarding the health effects of EMF exposure, refer to the 2016 CPUC Electromagnetic Field Investigation (CPUC, 2016).

The CPUC does not consider EMF to be an environmental issue in the context of CEQA because (1) there is no agreement among scientists that EMF creates a potential health risk, and (2) CEQA does not define or adopt standards for evaluating/analyzing any potential risk from EMF. Studies have correlated increased occurrences of cancers, including leukemia, brain cancer, and breast cancer, with exposure to EMF. Although the CPUC does not analyze the EMF in the context of CEQA, SCE is required to implement EMF reduction measures to minimize public exposure to EMF from transmission lines.

A discussion of existing EMF research and methods employed to minimize EMF is presented here for the benefit of the public and decision makers for informational purposes only. Further project-specific information about EMF is presented in Appendix C of the Subsequent EIR.

Definition

Electric and magnetic fields are separate phenomena and occur both naturally and as a result of human activity across a broad electrical spectrum. Naturally-occurring electric and magnetic fields are caused by the weather and the Earth's geomagnetic field. The fields caused by human activity result from technological application of the electromagnetic spectrum for uses such as communications, appliances, and the generation, transmission, and local distribution of electricity. The frequency of a power line is determined by the rate at which electric and

magnetic fields change their direction each second. For power lines in the United States, the frequency of change is 60 times per second and is defined as 60 Hertz (Hz) power.

Electric fields from power lines are created whenever the lines are energized, with the strength of the field dependent directly on the voltage of the line creating it. Electric field strength is typically described in terms of kilovolts per meter (kV/m). Electric field strength attenuates (reduces) rapidly as the distance from the source increases. Electric fields are reduced in many locations because they are effectively shielded by most objects or materials such as trees or houses. Unlike magnetic fields, which penetrate almost everything and are unaffected by buildings, trees, and other obstacles, electric fields are distorted by any object that is within the electric field, including the human body.

Magnetic fields from power lines are created whenever current flows through power lines at any voltage. The strength of the field is directly dependent on the current in the line. Magnetic field strength is typically measured in milligauss (mG). Similar to electric fields, magnetic field strength attenuates rapidly with distance from the source. However, unlike electric fields, magnetic fields are not easily shielded by objects or materials.

The nature of electric and magnetic fields can be illustrated by considering a household appliance. When the appliance is plugged into an outlet but not turned on, energized, no current flows through it. Under such circumstances, an electric field is generated around the cord and appliance, but no magnetic field is present. If the appliance is switched on, the electric field is still present, and a magnetic field is created. The electric field strength is directly related to the magnitude of the voltage from the outlet and the magnetic field strength is directly related to the magnitude of the current flowing in the cord and appliance.

EMF Research

For more than 20 years, questions have been asked regarding the potential effects of EMF from power lines, and research has been conducted to provide some basis for response. Earlier studies focused primarily on interactions with the electric fields from power lines. In the late 1970s, the subject of magnetic field interactions began to receive additional public attention and research levels have increased. A substantial amount of research investigating both electric and magnetic fields has been conducted over the past several decades; however, much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive.

Research related to EMF can be grouped into several general categories: cellular level studies, animal studies, clinical studies, and epidemiological studies. Epidemiological studies have provided mixed results, with some studies showing an apparent association between magnetic fields and health effects while most other similar studies do not. Laboratory studies and studies investigating a possible mechanism for health effects (mechanistic studies) provide little or no evidence to support this link (NIEHS, 2002).

Extremely low frequency (ELF) fields are known to interact with human tissues by inducing electric fields and currents in these fields. However, the electric currents induced by ELF fields

commonly found in our environment are normally much lower than the strongest electric currents naturally occurring in the body such as those that control the beating of the heart. As a result, studies and the information presented here primarily focus on ELF magnetic fields.

The first study in 1979 and several subsequent studies were conducted to identify whether a relationship existed between power line configurations (wire codes) near homes and childhood leukemia. The wire codes were determined for the assumed ability to produce elevated EMF and magnetic fields in homes. An association was found between the presumed high magnetic field wire codes and childhood leukemia (Wertheimer & Leeper, 1979). Measurements of magnetic field intensity were not conducted during these studies. Larger and more recent studies on the same topic have not find an association (NIEHS, 2002).

Many studies have been conducted to determine residential exposure to magnetic fields and childhood leukemia, which have found weak evidence for an association at exposures above 3 mG. A few studies have been conducted on residential exposure to magnetic fields and adult cancers (i.e., leukemia, brain cancer, and breast cancer), which have not established an association. Some studies of workplace EMF exposure have found evidence that suggests a link between EMF exposure and both leukemia and brain cancer, whereas other studies of similar size and quality have not found such associations (NIEHS, 2002).

Scientific Panel Reviews

Numerous panels of expert scientists have convened to review the data relevant to the question of whether exposure to power-frequency EMF is associated with adverse health effects. These evaluations have been conducted in order to advise governmental agencies or professional standard-setting groups. These panels of scientists first evaluate the available studies individually, not only to determine what specific information they can offer, but also in terms of the validity of their experimental design, methods of data collection, analysis, and suitability of the authors' conclusions to the nature and quality of the data presented. Subsequently, the individual studies, with their previously identified strengths and weaknesses, are evaluated collectively in an effort to identify whether there is a consistent pattern or trend in the data that would lead to a determination of possible or probable hazards to human health resulting from exposure to these fields.

These reviews include those prepared by international agencies such as the World Health Organization (WHO) (WHO, 1984; WHO, 1987; WHO, 2001; WHO, 2007), the international Non-Ionizing Radiation Committee of the International Radiation Protection Association (IRPA/INIRC, 1990), and governmental agencies of a number of countries, such as the U.S. Environmental Protection Agency (USEPA), the National Radiological Protection Board of the

The power frequencies (50/60 Hz) are part of the ELF (3 Hz to 300 Hz) bandwidth.

United Kingdom, the Health Council of the Netherlands, and the French and Danish Ministries of Health.

As noted below these scientific panels have varied conclusions on the strength of the scientific evidence suggesting that power frequency EMF exposures pose any health risk.

National Institute of Environmental Health Sciences

In May 1999, the National Institute of Environmental Health Sciences (NIEHS) submitted to Congress its report titled, Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields, containing the following conclusion regarding EMF and health effects:

Using criteria developed by the International Agency for Research on Cancer (IARC), none of the Working Group considered the evidence strong enough to label ELF-EMF exposure as a 'known human carcinogen' or 'probable human carcinogen'. However, a majority of the members of this Working Group... concluded that exposure to power-line frequency ELF-EMF is a 'possible' carcinogen.

World Health Organization

In June 2001, a scientific working group of International Agency for Research on Cancer (IARC) (an agency of the WHO) reviewed studies related to the carcinogenicity of EMF. Using standard IARC classification, ELF magnetic fields were classified as "possibly carcinogenic to humans" based on epidemiological studies (IARC, 2001).

"Possibly carcinogenic to humans" is a classification used to denote an agent for which there is limited evidence of carcinogenicity in humans and less than sufficient evidence of carcinogenicity in experimental animals. Other agents identified as "possibly carcinogenic to humans" include gasoline exhaust, styrene, welding fumes, and coffee.

In addition to the uncertainty regarding the level of health risk posed by EMF, individual studies and scientific panels have not been able to determine or reach consensus regarding what level of magnetic field exposure might constitute a health risk. In some early epidemiological studies, increased health risks were discussed for daily time-weighted average field levels greater than 2 mG. However, the IARC scientific working group indicated that studies with average magnetic field levels of 3 to 4 mG played a pivotal role in their classification of EMF as a possible carcinogen.

The 2007 WHO [Environmental Health Criteria 238] report concluded that existing evidence indicating a link between ELF magnetic fields and health risks is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukemia. "[V]irtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level ELF magnetic fields and changes in biological function or disease status... [As such,] the evidence is not strong enough to be considered causal but sufficiently strong to remain a concern... For other diseases, there is inadequate or no evidence of health effects at low exposure levels." (WHO, 2007)

California Department of Health Services

On behalf of the CPUC, the California Department of Health Services (DHS) completed a comprehensive review of existing studies related to EMF from power lines and potential health risks. This risk evaluation was undertaken by three staff scientists with the DHS. Each of these scientists is identified in the review results as an epidemiologist, and their work took place from 2000 to 2002. The conclusions contained in the executive summary are provided below (DHS, 2002):

- To one degree or another, all three of the DHS scientists are inclined to believe that EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's Disease, and miscarriage.
- They strongly believe that EMFs do not increase the risk of birth defects, or low birth weight.
- They strongly believe that EMFs are not universal carcinogens, since there are a number of cancer types that are not associated with EMF exposure.
- To one degree or another they are inclined to believe that EMFs do not cause an
 increased risk of breast cancer, heart disease, Alzheimer's Disease, depression, or
 symptoms attributed by some to sensitivity to EMFs. However, all three
 scientists had judgments that were 'close to the dividing line between believing
 and not believing' that EMFs cause some degree of increased risk of suicide.
- For adult leukemia, two of the scientists are 'close to the dividing line between believing or not believing' and one was 'prone to believe' that EMFs cause some degree of increased risk.

The report indicates that the DHS scientists are more inclined to believe that EMF exposure increased the risk of the above health problems than the majority of the members of scientific committees that have previously convened to evaluate the scientific literature. With regard to why the DHS review's conclusions differ from those of other recent reviews, the report states:

The three DHS scientists thought there were reasons why animal and test tube experiments might have failed to pick up a mechanism or a health problem; hence, the absence of much support from such animal and test tube studies did not reduce their confidence much or lead them to strongly distrust epidemiological evidence from statistical studies in human populations. They therefore had more faith in the quality of the epidemiological studies in human populations and hence gave more credence to them.

While the results of the DHS report indicate these scientists believe that EMF can cause some degree of increased risk for certain health problems, the report did not quantify the degree of risk or make any specific recommendations to the CPUC.

Methods to Reduce Magnetic Fields

EMF levels from transmission lines can be reduced in three primary ways: shielding, field cancellation, or increasing the distance from the source. Shielding, which reduces exposure to electric fields, can be actively accomplished by placing trees or other physical barriers along the transmission line ROW. Shielding also results from existing structures the public may use or

occupy along the line. Since electric fields can be blocked by most materials, shielding is effective for the electric fields but is not effective for magnetic fields.

Magnetic fields can be reduced either by cancellation or by increasing distance from the source. Cancellation is achieved in two ways. A transmission line circuit consists of three "phases"—three separate wires (conductors) on a transmission tower. The configuration of these three conductors can reduce magnetic fields. First, when the configuration places the three conductors closer together, the interference, or cancellation, of the fields from each wire is enhanced. This technique has practical limitations because of the potential for short circuits if the wires are placed too close together. There are also worker safety issues to consider if spacing is reduced. Second, in instances where there are two circuits (more than three-phase wires), such as in portions of the proposed project, cancellation can be accomplished by arranging phase wires from the different circuits that are near each other. In underground lines, the three phases typically can be placed much closer together than for overhead lines because the cables are placed in dielectric conduits.

The distance between the source of fields and the public can be increased by either placing the wires higher aboveground, burying underground cables deeper, or by increasing the width of the ROW. For transmission lines, these methods can prove effective in reducing fields because the reduction of the field strength drops rapidly with distance.

Proposed EMF Reduction Measures

SCE would implement low- and no-cost measures to reduce magnetic field levels for the proposed project using the 4 percent CPUC benchmark, and SCE's *RTRP Field Management Plan* filed with the CPUC in compliance with CPUC Decisions 93-11-013 and 06-01-042. The measures SCE considered for the proposed project are summarized in Table 3.1-2.

Table 3.1-2 Low- and No-Cost Mitigation Measures SCE Proposed for the Proposed Project

Project Component(s)	EMF Reduction Design Option Considered	
230-kV LST structures throughout the transmission route (certain locations)	Utilize double-circuit construction that reduces spacing between circuits as compared with single-circuit construction	
	Phase (arrange) conductors of the proposed transmission line for magnetic field reduction	
	Raise the lowest conductor ground clearance	
230-kV TSP structures throughout the transmission route (all locations)	Utilize double-circuit construction that reduces spacing between circuits as compared with single-circuit construction	
	Phase conductors of the proposed transmission line for magnetic field reduction	
	Raise the lowest conductor ground clearance	
Underground Transmission Line Segment	Arrange underground conductors to reduce magnetic field	

If the Proposed Project or an alternative is approved, the CPUC would monitor implementation of the measures included in SCE's *RTRP Field Management Plan*. These measures would be included in the Mitigation Monitoring and Compliance Reporting Program (MMCRP).

3.1.9.1 Proposed Project Magnetic Field Values and Comparative Data
The magnetic field levels from the Proposed Project on both sides of the ROW with and without mitigation were modeled, as shown in Table 3.1-3. No existing magnetic fields from power lines occur in the modeled areas. Further details and information are provided in Appendix C of the Subsequent EIR.

Table 3.1-3 Proposed and Mitigated Magnetic Field Values for the Proposed Project

		Vista-Wildlife Side of ROW		Mira Loma-Wildlife Side of ROW	
Project Component	Distance	Proposed (mG)	Mitigated (mG)	Proposed (mG)	Mitigated (mG)
Overhead 230-kV transmission line	100 feet at LST structures (certain locations)	18.6	13.0	12.6	6.7
Overhead 230-kV transmission line	100 feet at TSP structures (all locations)	18.8	13.1	13.0	6.9
Underground 230- kV transmission line	~3 feet (1 meter) aboveground	63.4	9.5 - 10.1	15.5	3.0 - 4.4

EMF research on ambient magnetic fields in homes and buildings in several western states found average magnetic field levels within most rooms to be approximately 1 milligauss (mG), while in a room with appliances present, the measured values ranged from 9 to 20 mG (Silva, Hummon, Rutter, & Hooper, 1989; Severson, et al., 1988). Immediately adjacent to commonly found appliances, magnetic field values are much higher, as illustrated in Table 3.1-4. The mitigated magnetic fields are within the range of commonly used household appliances.

Table 3.1-4 Typical Magnetic Field Value Comparisons at 1 Foot

Appliance	Magnetic Field Strength (mG)	Transmission Line	Magnetic Field Strength (mG)
Coffee maker	0.8 to 1	Electric drill	25 to 35
Clothes dryer	1 to 3	Fluorescent desk lamp	6 to 20
Refrigerator	0.3 to 3	Hair dryer	1 to 70
Electric oven	2 to 25	Electric shaver	1 to 100
Clothes washer	2 to 30	Vacuum cleaner	20 to 200

Source: (Gauger, 1985)

3.1.10 MR-10 Effects on Property Values and Commercial Development

Overview

Several commenters have expressed concerns about the effects of the Revised Project and/or alternatives on property values of homes, as well as effects on commercial development. Members of the public commented that property values would diminish as a result of increased hazards to human health and safety (including increases in EMF) and visual impacts associated with living in proximity to the proposed 230-kV transmission line. Commenters asserted that the presence of transmission lines will adversely affect future commercial development of the area and will affect tenant's desire to rent and/or develop commercial space.

An EIR is required to evaluate the physical environmental impacts of a project (PRC § 21100); a project's economic and social effects are not treated as effects on the environment (CEQA Guidelines Section 15131[a]) because they have no direct physical effect.

The environmental and health effects of the proposed project are discussed in the following sections: MR-5 provides information regarding the visual impacts of transmission lines; MR-6 and MR-9 provide information regarding the health effects of transmission lines in regard to shock hazards and magnetic fields, respectively.

Consideration of Property Values in the CPUC General Proceeding

Although not required under CEQA, impacts on property values may be presented and discussed at the evidentiary or public participation hearings for the Proposed Project or selected alternative. Any issues presented during the evidentiary or public participation hearings will be considered by the CPUC in their decision-making process. For further information regarding evidentiary hearings and the CPUC decision-making process, refer to MR-4.

3.1.11 MR-11 Environmental Justice

Overview

Several commenters expressed concern regarding environmental justice, and social and economic issues related to the Revised Project.

Relation to the Proposed Project

The Master Response #7: Economic and Social Impacts/Environmental Justice in Chapter 2: Comments Received and Responses to Comments of the certified 2013 RTRP EIR provides information regarding the environmental justice issues associated with the Proposed Project.

CEQA Requirements

The National Environmental Policy Act (NEPA) (see United States Code, title 42, 4331(a), 4342, 4344) requires analysis of social justice issues. Under CEQA, a lead agency has an obligation to analyze impacts on the physical environment, but not necessarily impacts on social or economic conditions (CEQA Guidelines Section 15131). Social and economic effects resulting in a physical environmental impact may be used to determine the significance of that impact in the context of

CEQA. The impacts on the physical environment would be identified the same way irrespective of the socio-economic context. The Subsequent EIR assesses the impacts on the entire affected community, including the vulnerable populations that would be affected by the Revised Project.

Local Involvement

The CPUC has conducted the same or greater outreach to the community as is normally conducted for this type of project. Informational material was delivered to residents within the Revised Project area during scoping for the Revised Project. The full Subsequent EIR was provided at local repositories. Additionally, public workshops were held on April 24 and 25, 2018 in the Revised Project area. The CPUC notices, scoping meeting, and workshops gave local residents an opportunity to be involved in the land use planning process, have their questions answered, submit comments on record, and learn how they can become engaged in the public decision-making process of the CPUC. The environmental issues have been thoroughly addressed. Community concerns have been addressed through mitigation measures and the definition of alternatives to reduce or avoid environmental impacts.

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