A. Introduction/Overview

Figure A-1, Regional Overview of the El Casco System Project, shows the locations of the proposed El Casco Substation, subtransmission line upgrades, and telecommunication facilities associated with the Proposed Project.

On February 16, 2007, Southern California Edison (SCE) submitted to the California Public Utilities Commission (CPUC) Application No. A.07-02-022 for a Permit to Construct (PTC), accompanied by its Proponent's Environmental Assessment (PEA) for the El Casco System Project. This Draft Environmental Impact Report (EIR) has been prepared by the CPUC as Lead Agency under the California Environmental Quality Act (CEQA) to inform the public and to meet the needs of local, State, and federal permitting agencies to consider the Project proposed by SCE (or "the Applicant").

The El Casco System Project proposed by SCE (the "Proposed Project") is described briefly below, and in detail in Section B (Project Description) of this EIR. This EIR does not make a recommendation regarding the approval or denial of the Project; it is purely informational in content and will be used by the CPUC in considering whether or not to approve the Proposed Project or an alternative.

This EIR evaluates and presents the environmental impacts that are expected to result from construction and operation of SCE's Proposed Project and presents recommended mitigation measures that, if adopted, would avoid or minimize the significant environmental impacts identified. In accordance with CEQA requirements, this EIR also identifies alternatives to the Proposed Project that could avoid or minimize significant environmental impacts associated with the Project as proposed by SCE (including the No Project Alternative), and evaluates the environmental impacts associated with these alternatives. Based on this environmental impact assessment, as well as the relative sensitivities of impacts in the study region, this EIR identifies the Environmentally Superior Alternative as required by CEQA.

This EIR reflects input by government officials, agencies, nongovernmental organizations, and concerned members of the public made during the EIR scoping period following the CPUC's publication of the Notice of Preparation (NOP) of an EIR (July 16, 2007). During this comment period, several public involvement activities were completed: distribution of the NOP and a scoping meeting notice, establishment of an Internet web page and a telephone hotline, and two public scoping meetings (see details in Section H, Public Participation). In addition, the CPUC contacted affected public agencies prior to issuance of the NOP to consult with them and solicit their input regarding the Proposed Project.

This section is organized as follows: Section A.1 briefly describes the El Casco System Project as proposed by SCE; Section A.2 explains the area's electric system and presents information related to the need for the Proposed Project; Section A.3 describes agency use of the EIR and includes a brief description of the CPUC process for consideration of Project approval; and Section A.4 presents a Reader's Guide to this EIR, explaining how it is organized.

A.1 HISTORY AND OVERVIEW OF THE PROPOSED PROJECT

Northern Riverside County's electrical needs are currently served from SCE's main electrical grid via the existing 220/115 kilovolt (kV) Vista Substation and connecting transmission, subtransmission, and distribution facilities (referred to as the Vista System), and the 500/220/115 kV Devers Substation and connecting transmission, subtransmission, and distribution facilities (referred to as the Devers System). The Vista System serves approximately 150,000 metered customers and is bounded to the north by the

San Bernardino National Forest, to the south and west by SCE's service territory, and to the east by the City of Banning's municipal utility service territory. The Vista 500/220/115 kV Substation provides electrical energy to fifteen 115 kV substations within the Vista System, which include the Maraschino, Mentone, Crafton Hills, and Zanja Substations. The Devers System serves approximately 160,000 metered customers and is bounded to the north, south, and east by SCE's service territory and to the west by the City of Banning's municipal utility service territory. The Devers 500/220/115 kV Substation provides electrical energy to twelve 115 kV substations within the Devers System, one of which is the Banning Substation.

Both the Maraschino Substation, located within the eastern portion of the Vista System, and the Banning Substation, located within the western portion of the Devers System, have become heavily loaded due to the rapidly growing development in the northern Riverside County area. Projected peak demand in northern Riverside will exceed the operating limits of the 220/115 kV transformers that currently serve the Vista System by 2008 and the 115/12 kV transformers at the Maraschino Substation during summer 2007.

Currently, SCE's existing subtransmission line right-of-way (ROW) is an active line serving as an overload emergency electrical source between the Devers and Vista 115 kV Systems in the event either system reaches capacity. When the Devers and Vista Systems are operating normally, no load travels through the existing 115 kV subtransmission line. Upgrading this line per the Proposed Project would ensure that safe and reliable electric service is available to meet customer electrical demand without overloading the existing electrical facilities that supply northern Riverside County by:

- Providing load relief to the Vista and Devers Systems through the transfer of load from the Banning, Maraschino, Mentone, Crafton Hills, and Zanja Substations to the newly created El Casco System; and
- Allowing load transfers between the Devers, Vista, and the new El Casco Systems under both normal and abnormal conditions.

The proposed El Casco System Project would include the following major components:

- Construct a new 220/115/12 kV substation within the Norton Younglove Reserve in the County of Riverside (El Casco Substation), associated 220 kV and 115 kV interconnections, and new 12 kV line getaways.
- Replace approximately 13 miles of existing single-circuit 115 kV subtransmission lines with new, higher capacity double-circuit 115 kV subtransmission lines and replace support structures within existing SCE ROWs in the Cities of Banning and Beaumont and unincorporated areas of Riverside County.
- Replace approximately 1.9 miles of existing single-circuit 115 kV subtransmission lines with new, higher capacity single-circuit 115 kV subtransmission lines and replace support structures within existing SCE ROWs in the City of Beaumont and unincorporated Riverside County.
- Replace approximately 0.5 mile of existing single-circuit 115 kV subtransmission lines with new, higher capacity single-circuit 115 kV subtransmission lines on existing support structures within existing SCE ROWs in the City of Beaumont and unincorporated Riverside County.
- Rebuild 115 kV switchracks within Banning and Zanja Substations in the Cities of Banning and Yucaipa, respectively.
- Install telecommunications equipment at the proposed El Casco Substation and at SCE's existing Mill Creek Communications site.
- Install fiber optic cables within public streets and on existing SCE structures between the Cities of Redlands and Banning.

Figure A-1, El Casco System Project Overview, shows the locations of the proposed El Casco Substation, subtransmission line upgrades, and telecommunication facilities associated with the Proposed Project.

Click here for Figure A-1

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A.2 PROPOSED PROJECT OBJECTIVES

A.2.1 Statement of Objectives

CEQA Guidelines (Section 15126.6[a]) require that to be evaluated in an EIR, alternatives to a proposed project must meet most of the project objectives. Currently, Maraschino Substation, located in the eastern portion of the Vista System, serves the rapidly growing development in this area. However, as discussed below, the Vista System (and Maraschino Substation in particular) cannot accommodate the anticipated load growth. Therefore, the El Casco Substation is needed to serve increased electrical demand in the Calimesa, Beaumont, and the surrounding areas of unincorporated northern Riverside County (Electrical Needs Area). In addition, other components of the Proposed Project (such as modifications to existing substations), are needed to address reliability issues and to relieve load within the Devers and Vista 115 kV Systems.

The purpose of the Project is to build electrical facilities necessary to serve forecasted demand in the Electrical Needs Area (see Figure A-2, Electrical Needs Area and Affected Substations) and to maintain safe and reliable service to customers in this area. Studies indicate that increased electrical demand in the Electrical Needs Area could exceed SCE's existing electrical system capacity serving this area as early as summer of 2007.

In addition to serving the forecasted demand in the Electrical Needs Area, the Project would relieve the Vista System and Devers System by transferring electrical demand from these systems to the new El Casco System. The Project would also improve electrical reliability and operational flexibility in northern Riverside County.

To maintain safe and reliable service and serve customer electrical demands, SCE proposes to construct the El Casco System Project (Proposed Project). In its PEA, SCE lists the following as its basic objectives for the El Casco System Project:

- Serve long-term projected electrical load requirements in the Electrical Needs Area;
- Provide enhanced system reliability by constructing a project in a suitable location to serve the Electrical Needs Area;
- Provide greater operational flexibility to transfer load between lines and substations;
- Provide substations with more than one 28 mega volt ampere (MVA) transformer with service from two 115 kV lines;
- Provide safe and reliable electrical service consistent with SCE's planning guidelines and Subtransmission Guidelines;
- Meet project need while minimizing environmental impacts; and
- Meet project need in a cost-effective manner.

A.2.2 Electrical Supply and System Issues

Electrical transmission, subtransmission, and distribution systems must have sufficient capacity to maintain safe, reliable, and adequate service to customers under the Federal Energy Regulatory Commission (FERC), North American Electric Reliability Council (NERC), Western Energy Coordinating Council (WECC), and California Public Utilities Commission (CPUC) rules, guidelines and regulations. The safety and reliability of the systems must be maintained under normal conditions

Click here for Figure A-2

when all facilities are in service, and also maintained under abnormal conditions when facilities are out of service due to equipment or line failures, maintenance outages, or outages that cannot be predicted or controlled that are caused by weather, earthquakes, traffic accidents, and other unforeseeable events.

SCE utilizes a multi-step planning process to ensure the necessary system facilities are developed in time to meet increased electrical demand. The planning process begins with the development of a peak demand forecast for each substation. Peak demand forecasts are developed using historical data and trends in population data, urbanization data, and meteorological data. Because electrical systems have certain loading limits, technical engineering studies are then conducted to determine whether the forecasted peak demand can be accommodated on the existing transmission, subtransmission, and distribution systems. When projections indicate that these limits will be exceeded within an appropriate planning horizon, a project is proposed to keep the electrical system within specified loading limits. In addition to considering the operating limits of a single substation, SCE evaluates the ability to transfer the load from that single substation to adjacent substations in the system. This process has identified the need for the El Casco System Project as described above in the Statement of Objectives.

Over the next five years, SCE is expecting to construct an unprecedented level of electrical projects throughout its service territory. As a result, SCE will be constrained in its ability to construct these projects because of the availability of necessary resources, specifically in the areas of financing and manpower. To manage the impact of the workload on available resources, engineering and construction efforts must be distributed over time. Therefore, the El Casco System Project would be constructed from approximately June 2008 to June 2010, and the Project would be operational in two phases. The 115/12 kV portion of the substation would be operational by June 2009. The 220/115 kV portion of the substation and remaining components of the Project would be operational by June 2010.

Upon completion of the 115/12 kV portion of the substation, the substation would serve local load currently served by Maraschino Substation. Upon completion of the 220/115 kV portion of the substation, the new El Casco 115 kV System would be created. This system would serve five existing distribution substations that are currently served by the Vista and Devers 115 kV Systems (Crafton Hills, Maraschino, Mentone, Zanja, and Banning Substations), as illustrated in Figure A-2, Electrical Needs Area and Affected SCE Substations. The following sections discuss both the Vista and Devers Systems, including the Crafton Hills, Maraschino, Mentone, Zanja, and Banning Substations, and the current electrical supply and system issues at these existing facilities.

A.2.2.1 Vista System Overview

The Vista System serves approximately 150,000 metered customers and is bounded to the north by the San Bernardino National Forest, to the south and west by SCE's service territory, and to the east by the City of Banning's municipal utility service territory. The Vista System is comprised of the Vista 220/115 kV Substation and connecting subtransmission and distribution facilities. The Vista 220/115 kV Substation provides electrical energy to fifteen 115 kV substations within the Vista System, which include: Maraschino, Mentone, Crafton Hills, and Zanja Substations (refer to Figure A-2, Electrical Needs Area and Affected SCE Substations).

Vista System – Vista 220/115 kV Substation

The Vista Substation reduces voltage from 220 kV to 115 kV with two 280 MVA transformers. The amount of electrical load that can be served in northern Riverside County is limited to the maximum amount of electrical power that these two transformers can deliver before exceeding their operating

limits. Operating limits are established to ensure that SCE maintains the required capacity and operational flexibility to safely and reliably meet the projected peak electrical demands during periods of extreme heat under both normal and abnormal conditions. Based on these factors, the capacity of the existing Vista System is limited to 560 MVA under normal operating conditions.

Based on historical growth trends and known residential, commercial, and industrial developments either under construction or planned in the Project area, SCE projects that the weather adjusted peak demand will increase to 572 MVA by 2008 (an average annual compound growth rate of 3.3 percent). This projected electrical demand will exceed the operating limits of the transformers currently serving the Vista System.

Because the second stage of the Proposed Project will not be operational until 2010, overload conditions may occur in the Vista Substation service area between 2008 and 2010 if actual demand exceeds the operating capacity of the transformers at Vista Substation. Exceeding operating limits results in a deviation from SCE planning guidelines. To address this deviation and mitigate potential overload conditions prior to the operating procedures within the Vista System during 2008 and 2009. These operating procedures could include contracting local generation, temporarily transferring Vista System substations to adjacent 115 kV systems, dropping load, and/or implementing rolling blackouts.

Vista System - Maraschino 115/12 kV Substation

Maraschino Substation reduces voltage from 115 kV to 12 kV with two 28 MVA transformers. Maraschino Substation is connected to the Vista System through one preferred 115 kV line, named the Vista-Maraschino-San Bernardino 115 kV line. During abnormal conditions, Maraschino Substation can be transferred to the Devers System through one emergency 115 kV line, named the Banning-Garnet-Maraschino-Windfarm 115 kV line.

The amount of electrical load that can be served in the Electrical Needs Area is limited to the maximum amount of electrical power that Maraschino Substation can deliver before exceeding its operating limits. The operational capacity of the existing Maraschino Substation is limited to 65 MVA under normal operating conditions.

Based on historical growth trends and known residential, commercial, and industrial developments either under construction or planned in the Project area, SCE projects that the weather adjusted peak demand will increase to 69 MVA by 2007 (an average annual compound growth rate of 10.0 percent). This projected electrical demand will exceed the operating limits of the transformers serving Maraschino Substation.

To address the overload conditions that may occur in the Maraschino Substation service area prior to the operation of the first stage of the Proposed Project in 2009, SCE will add a third 28 MVA transformer and two 12 kV distribution lines (each approximately 9 miles in length) at Maraschino Substation in 2007. The addition of this third 28 MVA transformer will increase the operational capacity of Maraschino Substation to 109 MVA under normal operating conditions. However, the 2007 upgrades at Maraschino Substation will not address all of the deviations to SCE's planning guidelines, and reliability issues will continue to exist within the Maraschino Substation service area due to the current 115 kV line arrangement and the length of 12 kV distribution lines.

To accommodate the load growth in the Maraschino Substation service area, SCE has built increasingly longer 12 kV distribution lines at Maraschino Substation, which significantly exceed the maximum

preferred distribution line length of approximately four miles. As distribution lines increase in length and the load on those lines continues to grow, the voltage to the end of the line decreases and exposure to outages increases, resulting in reduced reliability to the customers served by those lines. In addition, longer distribution lines create difficulties in transferring load between distribution lines and between distribution substations. Load transfers are standard procedures to mitigate distribution circuit and substation overloads during normal and abnormal operating conditions. The inability to transfer load results in diminished operating capabilities and reduced reliability. By 2009, the projected electrical demand will exceed the operating capabilities of the lengthy distribution lines currently serving the Maraschino Substation service area. Therefore, the first stage of the Proposed Project would be operational by 2009 to address reliability problems resulting from longer distribution lines.

Vista System – Zanja 115/33 kV Substation

Zanja Substation reduces voltage from 115 kV to 33 kV with one 10 MVA transformer. Zanja Substation is connected to the Vista System through one preferred 115 kV line, named the Crafton Hills-Mentone-Zanja 115 kV line. During abnormal conditions, Zanja Substation can be transferred to the Devers System through one emergency 115 kV line, named the Devers-Banning-Windpark-Zanja 115 kV line.

Currently, Zanja Substation can only be served by one 115 kV line at a time: either from the Vista System (referred to as the "preferred" line) or from the Devers System (referred to as the "emergency" line). Therefore, in the event of an outage on the preferred line, Zanja Substation would experience a brief outage until the emergency line is switched into service. Thus, an additional benefit from the Proposed Project would be a second 115 kV subtransmission line to serve Zanja Substation at all times, thereby reducing outages.

A.2.2.2 Devers System Overview

The Devers System serves approximately 160,000 metered customers and is bounded to the north, south, and east by SCE's service territory, and to the west by the City of Banning's municipal utility service territory. The Devers System is comprised of the Devers 500/220/115 kV Substation and connecting subtransmission and distribution facilities. The Devers 220/115 kV Substation provides electrical energy to twelve 115 kV substations within the Devers System, one of which is the Banning Substation (refer to Figure A-2, Electrical Needs Area and Affected SCE Substations).

Devers System – Banning 115/33 kV Substation

Banning Substation reduces voltage from 115 kV to 33 kV with two 56 MVA transformers. Banning Substation is connected to the Devers System through one preferred 115 kV line, named the Devers-Banning-Windpark-Zanja 115 kV line. During abnormal conditions, Banning Substation can be transferred to the emergency 115 kV line, the Banning-Garnet-Maraschino-Windfarm 115 kV line, which is also connected to the Devers System. As an additional contingency during abnormal conditions, both the preferred line and the emergency line can be connected to the Vista System to transfer Banning Substation to the Vista System.

Currently, Banning Substation can only be served by one 115 kV line at a time, either from the preferred line or from the emergency line. However, under SCE's Subtransmission Guidelines, a distribution substation with more than one 28 MVA transformer should normally be served by at least two 115 kV lines at all times. Therefore, to improve reliability and to conform to the Subtransmission

Guidelines, the Proposed Project is needed to provide additional 115 kV subtransmission lines to serve Banning Substation.

A.3 AGENCY USE OF THIS DOCUMENT

A.3.1 CPUC Process

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of investor-owned public utilities, including SCE. The CPUC is the State lead agency for CEQA compliance in evaluation of SCE's proposed El Casco System Project, and has directed the preparation of this EIR. This EIR will be used by the CPUC, in conjunction with other information developed in the CPUC's formal record, to act on SCE's application for a Permit to Construct (PTC) for construction and operation of the Proposed Project. Under CEQA requirements, the CPUC will determine the adequacy of the Final EIR and, if adequate, will certify the document as complying with CEQA. The Commission will also act on SCE's application for a PTC. If it approves a project with significant and unmitigable impacts, it must state why in a "Statement of Overriding Considerations," which would be included in the Commission's decision on the application.

The CPUC has assigned Administrative Law Judge (ALJ) Victoria Kolakowski to oversee the hearings on the Proposed Project, and Commissioner Dian Grueneich is the Assigned Commissioner for the PTC application. The ALJ will issue a Proposed Decision on the Project in Spring 2008. The ALJ's Decision, and the Evidentiary Hearings, will cover issues of Project need, Project cost, and other considerations.

A.3.2 Other Agencies

Several other State agencies will rely on information in this EIR to inform them in their decision over issuance of specific permits related to Project construction or operation. In addition to the CPUC, State agencies such as the Department of Transportation, Department of Fish and Game, Regional Water Quality Control Board, and Office of Historic Preservation would be involved in reviewing and/or approving the Project.

No local discretionary (e.g., use) permits are required, since the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of SCE facilities in California. SCE would still have to obtain all ministerial building and encroachment permits from local jurisdictions, and the CPUC's General Order 131-D requires SCE to comply with local building, design, and safety standards to the greatest degree feasible to minimize Project conflicts with local conditions. The CPUC's authority does not preempt special districts, such as the South Coast Air Quality Management District, or other State agencies or the federal government.

Table A-1 lists the federal, State, and local permits and authorization required for the Proposed Project.

Permits	Agency	Jurisdiction/Purpose
Federal Agencies		
Nationwide or Individual Permit (Section 404 of the Clean Water Act)	U.S. Army Corps of Engineers	Waters of the United States, including wetlands, ephemeral drainages
Section 7 consultation (through U.S. Army Corps of Engineer's review process)	U.S. Fish and Wildlife Service (USFWS)	Consultation on federally listed species; incidental take authorization (if required)
Lift Plan Permit	Federal Aviation Administration (FAA)	Potential Helicopter Construction Plans at the Mill Creek Communications Site (if applicable)
Section 106 of the NHPA Review (through U.S. Army Corp of Engineer's review process)	Advisory Council on Historic Preservation	Cultural Resource Management Plan (if appropriate)
State Agencies		
Permit to Construct	CPUC	Overall Project approval and CEQA environmental review process
National Pollutant Discharge Elimination System – General Construction Stormwater Permit Section 402	California Regional Water Quality Control Boards (RWQCB), Regions 7 and 8	This permit applies to all construction Projects that disturb more than 5 acres
Section 401 Water Quality Certification (or waiver thereof)	RWQCB	Requests RWQCB's certification that the Project is consistent with State water quality standards
Road Closures	Caltrans	Permit to install guard poles in roadway ROWs, temporary road closures, and potential stringing activities across I-10 (for Route Alternative Option 3)
Endangered Species consultation 2081	California Department of Fish and Game (CDFG)	Consultation on State-listed species; incidental take authorization (if required)
Section 1602 Streambed Alteration Agreement	CDFG	Modifications to bank of San Timoteo Creek, Jurisdictional Washes near Smith Creek
Consultation (through CEQA review process)	State Historic Preservation Officer	Cultural resources management (if appropriate)
Autionity to Construct/Permit to Operate	Management District	Demonuon of existing towers
Local Agencies		
Western Riverside County Multi-Species Habitat Conservation Plan	Riverside County	Compliance with MSHCP, documentation of HANS process or receive local waiver
Roadway Encroachment and Closure Permit	Riverside County, San Bernardino County	Permit to install guard poles in roadway ROWs, temporary road closures
Roadway Encroachment and Closure Permit	City of Beaumont, City of Banning, City of Redlands	Permit to install guard poles in roadway ROWs, temporary road closures
Grading and Building Permits	City of Beaumont, City of Banning, City of Yucaipa	Permission to conduct grading and building activities

Table A-1. Permits Required for the El Casco System Project

A.4 READER'S GUIDE TO THIS DOCUMENT

A.4.1 Incorporation by Reference

SCE's Proponent's Environmental Assessment (PEA) (submitted as part of its Application No. A.07-02-022 for the El Casco System Project) contains certain information that is incorporated by reference in some sections of this EIR. This document is available for public review during normal business hours in local libraries (see Section H, Public Participation, for locations), and also via the Internet at www.cpuc.ca.gov/Environment/info/aspen/elcasco/toc-pea.htm

A.4.2 EIR Organization

This EIR is organized as follows:

Executive Summary. A summary description of the Proposed Project, the alternatives, their respective environmental impacts, and the Environmentally Superior Alternative.

Section A (Introduction/Overview). A discussion of the background, objectives, purpose, and need for the Proposed Project; a brief description of the proposed El Casco System Project; an outline of the public agency use of the EIR; and identification of permits required by other public agencies.

Section B (Project Description). A detailed description of the proposed El Casco System Project.

Section C (Alternatives Process and Description). Description of the alternatives evaluation process, description of alternatives considered but eliminated from further analysis and the rationale for elimination, and description of the alternatives analyzed in Section D.

Section D (Environmental Analysis). A comprehensive analysis and assessment of impacts and mitigation measures for the Proposed Project and alternatives, including the No Project Alternative. This section is divided into main sections for each environmental issue area (e.g., Air Quality, Biological Resources) that contain the environmental settings, impacts, and any proposed mitigation of impacts of the Proposed Project and each alternative carried forward for full EIR analysis. At the end of each issue area analysis, a Mitigation Monitoring table is provided.

Section E (Comparison of Alternatives). Identification of the CEQA Environmentally Superior Alternative and a discussion of the relative advantages and disadvantages of the Proposed Project and alternatives that were evaluated.

Section F (Other Considerations). A discussion of additional CEQA considerations including growthinducing impacts, irreversible environmental changes, and cumulative impacts. In addition, this section discusses other considerations of the Proposed Project raised during public scoping or required based on recent legislation, including greenhouse gases, property values, terrorism, and electric and magnetic fields (EMF).

Section G (Mitigation Monitoring, Compliance, and Reporting Plan). A discussion of the mitigation monitoring program requirements for the Project as approved by the CPUC.

Section H (Public Participation). A brief description of the public participation program conducted for the environmental review process associated with the Proposed Project.

Appendices. In addition, there are a number of appendices that provide technical information in support of the analysis conducted for this EIR. They include:

- 1. Alternatives Screening Report
- 2. Notice of Preparation
- 3. Air Quality Calculations
- 4. Biological Resources Technical Appendix
- 5. Electric and Magnetic Fields (EMF) SCE Field Management Reports
- 6. Cultural Resources Tribal Consultation
- 7. Soils in the Proposed Project Area