BEFORE THE PUBLIC UTILITIES COMMISSION OF THE

STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Facilities With Voltages Between 50 kV and 200 kV: Presidential Substation Project	)))))	Application No. _____ (Filed December 22, 2008)

APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES WITH VOLTAGES BETWEEN 50 KV AND 200 KV: PRESIDENTIAL SUBSTATION PROJECT

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Dated: December 22, 2008

TABLE OF CONTENTS

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I.

INTRODUCTION

Pursuant to California Public Utilities Commission (Commission or CPUC), General Order 131-D (GO 131-D), Southern California Edison Company (SCE) respectfully submits this application (Application) for a permit to construct (PTC) authorizing SCE to construct the proposed project known as the Presidential Substation Project (Project). The Project consists of (1) construction of a 66/16 kilovolt (kV) substation (Presidential Substation) on an approximate 4-acre site located at the south side of Olsen Road in the City of Thousand Oaks, near the city limits of the City of Simi Valley; (2) replacement of approximately Seventy-Nine (79) wood distribution poles and lines in existing right of way in order to construct a new overhead 66 kV subtransmission line (approximately 3.5 miles in length) in existing rights-of-way, consisting of approximately 83 tubular steel poles and lightweight steel poles and subtransmission lines that would connect the Presidential Substation to the existing Moorpark-Royal No. 2 and Moorpark-Thousand Oaks No. 2 66 kV subtransmission lines; (3) construction of four new underground 16 kV distribution getaways at the substation; and (4) installation of new fiber optic cable and

communication equipment along the subtransmission line route to connect the proposed Presidential Substation to SCE's existing telecommunication system.

II.

BACKGROUND AND SUMMARY OF REQUEST

The Cities of Simi Valley and Thousand Oaks, as well as adjacent areas of unincorporated Ventura County (Electrical Needs Area) are currently served by three of the 66/16 kV distribution substations that are fed by SCE's Moorpark 66 kV System. These three substations (Thousand Oaks Substation, Potrero Substation, and Royal Substation) (Electrical Needs Area Substations) provide electrical service to approximately 60,000 metered customers.

Currently, the amount of electrical power that can be delivered into the Electrical Needs Area is limited to the maximum amount of combined electrical power that the Electrical Needs Area Substations can transmit before their operating capacity limits are exceeded. The combined operating capacity of the three substations is presently limited to 400 megavolt amperes (MVA). SCE's present forecast shows that demand in the Electrical Needs Area would exceed the operating limits of the Electrical Needs Area Substations as early as the summer of 2011.

In 2008, the actual recorded normal condition peak demand for the Electrical Needs Area Substations was collectively 336 MVA. By 2011, the peak demand for a 1-in-10-year heat storm is forecasted to be 401 MVA. As discussed above, in 2011, the maximum capacity of substations within the Electrical Needs Area will be limited to 400 MVA. As a result, the projected peak demand (1-in-10 Year Heat Storm) for 2011 exceeds the operating limits of the substations serving the Electrical Needs Area. Therefore, additional electrical capacity is required to serve the projected demand.

Construction of the Project will ensure that SCE is able to meet long term demand requirements beginning in 2011 and extending beyond 2014 in order to meet SCE's planning requirements. This Project will assist SCE in ensuring that safe and reliable electric service is available to meet customer electrical demand without overloading the existing electric facilities that supply the Electrical Needs Area. This would be accomplished by providing: (1) load relief to the Thousand Oaks, Potrero, and Royal 66/16 kV Substations; (2) enhanced system reliability by locating the substation in proximity to the load growth; (3) greater operational flexibility by providing the ability to transfer load between distribution lines and substations; and (4) sufficient capacity to meet long-term projected electrical demand in the area.

A Proponent's Environmental Assessment (PEA) prepared for the Project is attached to this Application. The PEA will be referenced in this Application, where appropriate, as the source of the information required in an Application for a PTC[1] pursuant to GO 131-D, Section IX.B. A complete project description is located in Chapter 3 of the PEA. A statement of purpose and need is located in Chapter 1 of the PEA.

Construction of the Project is anticipated to begin in January 2010 and to be completed by May 2011. A schedule for the Project is included in this Application as Appendix C.

Upon completion of its review of this Application and preparation of the initial study, SCE requests that the Commission issue and certify an appropriate environmental document and issue a PTC authorizing SCE to construct the Project set forth in this Application and the attached PEA within the timelines set forth in Section III.H. of this Application.

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[1] Other required information for a PTC application (e.g. Balance Sheet, Articles of Incorporation, etc.) is contained in this Application or its appendices.

III.

STATUTORY AND PROCEDURAL REQUIREMENTS

A. Applicant

The applicant is Southern California Edison Company, an electric public utility company organized and existing under the laws of the State of California. SCE's principal place of business is 2244 Walnut Grove Avenue, Post Office Box 800, Rosemead, California 91770. Please address correspondence or communications in regard to this Application to:

Albert J. Garcia
Senior Attorney
Southern California Edison Company
Post Office Box 800
Rosemead, California 91770
Phone: (626) 302-6832
Fax: (626) 302-1926

With a copy to:

Case Administration
Southern California Edison Company
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Phone: (626) 302-3101
Fax: (626) 302-3119

B. Articles Of Incorporation

A copy of SCE's Restated Articles of Incorporation, as amended through June 1, 1993, and as presently in effect, certified by the California Secretary of State, was filed with the Commission on June 15, 1993, in connection with Application No. 93-06-022[2] and is incorporated herein by reference; pursuant to Rule 2.2 of the Commission's Rules of Practice and Procedure.

C. Balance Sheet And Statement Of Income

Appendix A to this Application contains copies of SCE's balance sheet as of September 30, 2008, and the statement of income for the period ending September 30, 2008. The balance sheet reflects SCE's utility plant at original cost, less accumulated depreciation.

Since 1954, pursuant to Commission Decision No. 49665 dated February 16, 1954, in Application No. 33952, as modified by Decision No. 91799 in 1980, SCE has utilized straight-line remaining life depreciation for computing depreciation expense for accounting and ratemaking purposes in connection with its operations.

Pursuant to Commission Decision No. 59926, dated April 12, 1960, SCE uses accelerated depreciation for income tax purposes and "flows through" reductions in income tax to customers within the Commission's jurisdiction for property placed in service prior to 1981. Pursuant to Decision No. 93848 in OII-24, SCE uses the Accelerated Cost Recovery System (ACRS) for federal income tax purposes and "normalizes" reductions in income tax to customers for property placed in service after 1980 in compliance with the Economic Recovery Tax Act of 1981, and also in compliance with the Tax Reform Act of 1986. Pursuant to Decision No. 88-01-061, dated January 28, 1988, SCE uses a gross of tax interest rate in calculating the AFUDC Rate, and income tax normalization to account for the increased income tax expense occasioned by the Tax

[2] Application No. 93-06-22, filed June 15, 1993, regarding approval of a Self-Generation Deferral Agreement between Mobile Oil Corporation Torrance Refinery and Southern California Edison Company.

Relief Act of 1986 provisions requiring capitalization of interest during construction for income tax purposes.

D. Description of Southern California Edison Company

SCE is an investor-owned public utility engaged in the business of generating, transmitting, and distributing electric energy in portions of central and southern California. In addition to its properties in California, it owns, in some cases jointly with others, facilities in Nevada, Arizona, and New Mexico, its share of which produces power and energy for the use of its customers in California. In conducting such business, SCE operates an interconnected and integrated electric utility system.

E. Service Territory

SCE's service territory is located in 15 counties in central and southern California, consisting of Fresno, Imperial, Inyo, Kern, Kings, Los Angeles, Madera, Mono, Orange, Riverside, San Bernardino, Tulare, Tuolumne[3], and Ventura Counties, and includes approximately 179 incorporated communities as well as outlying rural territories. A list of the counties and municipalities served by SCE is attached hereto as Appendix B. SCE also supplies electricity to certain customers for resale under tariffs filed with the Federal Energy Regulatory Commission.

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[3] SCE provides electric service to a small number of customer accounts in Tuolumne County and is not subject to franchise requirements.

E. Location Of Items Required In A Permit To Construct Pursuant To GO 131-D, Section IX.B

Almost all of the information required to be included in a PTC application pursuant to GO 131-D, Section IX.B is found in the PEA.

Required PTC application information has been cross-referenced to the PEA in the following text. The PTC application requirements of GO 131-D, Section IX.B are in italics, and the PEA references follow in plain text.

a. *A description of the proposed power line or substation facilities, including the proposed power line route; proposed power line equipment, such as tower design and appearance, heights, conductor sizes, voltages, capacities, substations, switchyards, etc., and a proposed schedule for authorization, construction, and commencement of operation of the facilities.*

- Descriptions of the Project are found in the Executive Summary, Chapter 2, Chapter 3, and throughout Chapter 4.

- The substation site and alternative substation site are described and illustrated in Section 2.2.2 and Figure 2.1. The subtransmission source line route and alternative subtransmission source line routes are described and illustrated in Section 2.2.4 and Figure 2.1

- The physical characteristics of the substation and equipment are described and illustrated in Section 3.3.1 and Figure 3.1. The physical characteristics of the 66 kV subtransmission source line are described and illustrated in Section 3.1.2 and Figures 3.2 and 3.3.

- The Project Schedule is attached to this Application as Appendix C.

b. *A map of the proposed power line routing or substation location showing populated areas, parks, recreational areas, scenic areas, and existing electrical transmission or power lines within 300 feet of the proposed route or substation.*

- Maps of the proposed power line routing and substation location that show current land use including designation of parks, recreational, and scenic areas are provided as Figures 4.1.1, Figure 4.9-1 and Figure 4.14.

c. *Reasons for adoption of the power line route or substation location selected, including comparison with alternative routes or locations, including the advantages and disadvantages of each.*

- Reasons for the adoption of the proposed substation site including comparison with alternative sites are discussed in Sections 2.1.4, 2.2.3 and 2.2.5.

d. A listing of the governmental agencies with which proposed power line route or substation location reviews have been undertaken, including a written agency response to applicant's written request for a brief position statement by that agency. (Such listing shall include The Native American Heritage Commission, which shall constitute notice on California Indian Reservation Tribal governments.) In the absence of a written agency position statement, the utility may submit a statement of its understanding of the position of such agencies.

- SCE met with various representatives for the City of Thousand Oaks on August 14, 2008. A written statement from the City of Thousand Oaks, dated November 12, 2008, is attached to the PEA in Appendix I. Upon receipt of the written statement, SCE prepared written correspondence dated December 16, 2008 that SCE delivered at a follow-up meeting on December 18th, 2008, with representatives of the City of Thousand Oaks. During the meeting, SCE further discussed and describe the proposed project. SCE will supplement this Application if it receives any additional written statements from the City of Thousand Oaks.

- SCE met with various representatives for the City of Simi Valley on August 20, 2008. A written statement from the City of Simi Valley, dated November 17, 2008, is attached to the PEA in Appendix I. Upon receipt of the written statement, SCE had a follow-up meeting on December 18th, 2008, with representatives of the City of Simi Valley Oaks to further discuss and describe the proposed project. SCE will supplement this Application if it receives any additional written statements from the City of Simi Valley.

- On October 31, 2008, a written agency position statement was requested by SCE from the County of Ventura. As of the date of this Application, SCE has not received a written agency position statement. However, SCE has had several conversations with Ventura County staff members and officials, and SCE understands that the County of Ventura has no adverse comments on the Project as proposed in this Application, and the County of Ventura does not oppose the Project as proposed in this Application.

- On July 1, 2008, a written request was made to the Native American Heritage Commission (NAHC) to conduct a records search of the Sacred Lands File for cultural resources that may be affected by the Project. The Commission responded on July 3, 2008, stating that a search of the Sacred Lands File failed to indicate the presence of Native American cultural resources in the immediate project area. A list of Native American individuals and organizations that may have knowledge of cultural resources in the project area was enclosed in the response from NAHC. This information is attached to the PEA in Appendix I. SCE will contact these

individuals and organizations if, during archaeological monitoring, human remains are encountered.

e. *A PEA or equivalent information on the environmental impact of the project in accordance with the provisions of CEQA and this Commission's Rules of Practice and Procedure Rule 2.4 [formerly 17.1 and 17.3]. If a PEA is filed, it may include the data described in Items a. through d. above.*

- A PEA is attached to this Application

G. Compliance With GO 131-D, Section X

GO 131-D, Section X, requires applications for a PTC to describe measures taken to reduce potential exposure to electric and magnetic fields (EMF) generated by the proposed facilities. A complete description of EMF-related issues is contained in SCE's EMF Field Management Plan for this Project, which is attached as Appendix F to this Application.

H. Compliance With Rule 2.1(c)

In compliance with Rule 2.1(c) of the Commission's Rules of Practice and Procedure (California Code of Regulations, Title 20), SCE is required to state in this Application "[t]he proposed category for the proceeding, the need for hearing, the issues to be considered, and a proposed schedule." SCE proposes to categorize this Application as a rate-setting proceeding. SCE anticipates that a hearing will not be necessary. This proceeding involves the Commission's: (1) environmental review of the Project in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code § 21000 et seq.) and the Commission's GO 131-D; and (2) issuance of a PTC authorizing SCE to construct the Project.

SCE suggests the following proposed schedule for this Application:

December 22, 2008	Application filed.
January 21, 2009	Application accepted as complete.
March 2009	Initial Study issued.
August 2009	Draft CEQA document (Negative Declaration, Mitigated Negative Declaration or EIR) issued for comment.
October 2009	Draft decision issued.
December 2009	Final Commission decision issued. Final CEQA document certified.

I. Statutory Authority

This Application is made pursuant to the provisions of CEQA, GO 131-D, the Commission's Rules of Practice and Procedure, and prior orders and resolutions of the Commission.

J. Public Notice

Pursuant to GO 131-D, Section XI.A, notice of this Application shall be given: (1) to certain public agencies and legislative bodies; (2) to owners of property located on or within 300 feet of the project area; (3) by advertisement in a newspaper or newspapers of general circulation; and (4) by posting a notice on-site and off-site at the project location.

SCE has given, or will give, proper notice within the time limits prescribed in GO 131-D. A copy of the Notice of Application for a Permit to Construct and list of newspapers which will publish the notice are contained in Appendix D. A copy of the Certificate of Service of Notice of Application for a Permit to Construct and a service list are contained in Appendix E.

K. Supporting Appendices And Attachment

Appendices A through E and the attached PEA listed below are made a part of this Application:

- Appendix A: Balance Sheet and Statement of Income as of September 30, 2008
- Appendix B: List of Counties and Municipalities Served by SCE
- Appendix C: Presidential Substation Project Schedule
- Appendix D: Notice of Application for a Permit to Construct
- Appendix E: Certificate of Service of Notice of Application for a Permit to Construct
- Appendix F: Field Management Plan
- Attachment: Proponent's Environmental Assessment

L. Compliance With Rule 2.5

In accordance with Rule 2.5 of the Commission's Rules of Practice and Procedure, SCE is enclosing a deposit to be applied to the costs the Commission incurs to prepare a negative declaration or an environmental impact report for this Project.

M. Request For Ex Parte Relief

SCE requests that the relief requested in this Application be provided ex parte as provided for in GO 131-D, Section IX.B.6.

N. Request For Timely Relief

SCE requests the Commission to issue a decision within the time limits prescribed by Government Code Section 65920 et seq. (the Permit Streamlining Act) as provided for in GO 131-D, Section IX.B.6.

Moreover, as addressed in the same subsection of GO 131-D, SCE requests that the Commission refrain from assigning an ALJ to this proceeding, unless a valid protest is received by the Commission, and in the absence of any valid protest allow the Energy Division to process this Application.[4/]

4/ D.95-08-038, Appendix A, p. 25.

CONCLUSION

SCE respectfully requests the Commission to issue a PTC authorizing SCE to construct the Presidential Substation Project described in this Application and the attached PEA. SCE further requests that the relief be provided ex parte and within the time limits prescribed by the Permit Streamlining Act.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

By: Leslie E. Starck
Vice President

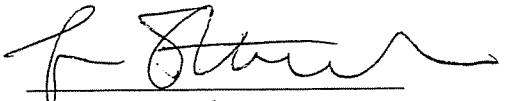
By: Albert J. Garcia
Attorney for
SOUTHERN CALIFORNIA EDISON COMPANY

VERIFICATION

I am an officer of the applicant corporation herein, and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in the foregoing document are true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 22 day of December 2008, at Rosemead, California.



Leslie E. Starck
Vice President
SOUTHERN CALIFORNIA EDISON COMPANY
Telephone: (626) 302-4883

APPENDIX A

Appendix A

BALANCE SHEET AND STATEMENT OF INCOME

AS OF SEPTEMBER 30, 2008

SOUTHERN CALIFORNIA EDISON COMPANY

BALANCE SHEET

SEPTEMBER 30, 2008

A S S E T S

(Unaudited)

(Millions of Dollars)

UTILITY PLANT:	
Utility plant, at original cost	$21,596
Less - Accumulated depreciation and decommissioning	(5,526)
	16,070
Construction work in progress	1,970
Nuclear fuel, at amortized cost	246
	18,286
OTHER PROPERTY AND INVESTMENTS:	
Nonutility property - less accumulated provision for depreciation of $748	967
Nuclear decommissioning trusts	2,855
Other Investments	86
	3,908
CURRENT ASSETS:	
Cash and equivalents	1,256
Short-term investments	3
Margin and collateral deposits	10
Receivables, including unbilled revenues, less reserves of $33 for uncollectible accounts	1,030
Accrued unbilled revenue	518
Inventory	352
Accumulated deferred income taxes - net	215
Derivative assets	125
Regulatory assets	454
Other current assets	84
	4,047
DEFERRED CHARGES:	
Regulatory assets	2,880
Derivative assets	13
Other long-term assets	658
	3,551
	$29,792

SOUTHERN CALIFORNIA EDISON COMPANY

BALANCE SHEET

SEPTEMBER 30, 2008

CAPITALIZATION AND LIABILITIES

(Unaudited)

(Millions of Dollars)

CAPITALIZATION:	
Common stock	$2,168
Additional paid-in capital	529
Accumulated other comprehensive loss	(17)
Retained Earnings	3,788
Common shareholder's equity	6,468
Preferred and preference stock not subject to redemption requirements	920
Long-term debt	5,714
	13,102
CURRENT LIABILITIES:	
Short-term debt	1,558
Long-term debt due within one year	150
Accounts payable	838
Accrued taxes	128
Accrued interest	105
Counterparty collateral	9
Customer deposits	226
Book overdrafts	298
Derivative liabilities	132
Regulatory liabilities	1,179
Other current liabilities	682
	5,305
DEFERRED CREDITS:	
Accumulated deferred income taxes - net	2,816
Accumulated deferred investment tax credits	100
Customer advances	134
Derivative liabilities	30
Power purchase contracts	21
Accumulated provision for pensions and benefits	857
Asset retirement obligations	2,966
Regulatory liabilities	2,889
Other deferred credits and other long-term liabilities	1,121
	10,934
Minority interest	451
	$29,792

SOUTHERN CALIFORNIA EDISON COMPANY

STATEMENT OF INCOME

NINE MONTHS ENDED SEPTEMBER 30, 2008

(Unaudited)

(Millions of Dollars)

OPERATING REVENUE	$8,390
OPERATING EXPENSES:	
Fuel	1,161
Purchased power	3,111
Provisions for regulatory adjustment clauses - net	(286)
Other operation and maintenance expenses	2,145
Depreciation, decommissioning and amortization	750
Property and other taxes	179
Gain on sale of assets	(9)
Total operating expenses	7,051
OPERATING INCOME	1,339
Interest income	12
Other nonoperating income	69
Interest expense - net of amounts capitalized	(297)
Other nonoperating deductions	(114)
INCOME BEFORE INCOME TAX AND MINORITY INTEREST	1,009
INCOME TAX EXPENSE	268
MINORITY INTEREST	161
NET INCOME	580
DIVIDENDS ON PREFERRED AND PREFERENCE STOCK - NOT SUBJECT TO MANDATORY REDEMPTION	38
NET INCOME AVAILABLE FOR COMMON STOCK	$542

APPENDIX B

Appendix B

LIST OF COUNTIES AND MUNICIPALITIES

SOUTHERN CALIFORNIA EDISON COMPANY

Citizens or some of the citizens of the following counties and municipal corporations will or may be affected by the changes in rates proposed herein.

COUNTIES

Fresno
Imperial
Inyo
Kern
Kings
Los Angeles
Madera
Mono
Orange
Riverside
San Bernardino
Santa Barbara
Tuolumne*
Tulare
Ventura

MUNICIPAL CORPORATIONS

Adelanto
Agoura Hills
Alhambra
Aliso Viejo
Apple Valley
Arcadia
Artesia
Avalon
Baldwin Park
Barstow
Beaumont
Bell
Bell Gardens
Bellflower
Beverly Hills
Bishop
Blythe
Bradbury
Brea
Buena Park
Calabasas
California City
Calimesa
Camarillo
Canyon Lake
Carpinteria
Carson
Cathedral City
Cerritos
Chino
Chino Hills
Claremont
Commerce
Compton
Corona
Costa Mesa
Covina
Cudahy
Culver City
Cypress
Delano
Desert Hot Springs
Diamond Bar
Downey
Duarte
El Monte
El Segundo
Exeter
Farmersville
Fillmore
Fontana
Fountain Valley
Fullerton
Garden Grove
Gardena
Glendora
Goleta
Grand Terrace
Hanford
Hawaiian Gardens
Hawthorne
Hemet
Hermosa Beach
Hesperia
Hidden Hills
Highland
Huntington Beach
Huntington Park
Indian Wells
Industry
Inglewood
Irvine
Irwindale
La Canada Flintridge
La Habra
La Habra Heights
La Mirada
La Palma
La Puente
La Verne
Laguna Beach
Laguna Hills
Laguna Niguel
Laguna Woods
Lake Elsinore
Lake Forest
Lakewood
Lancaster
Lawndale
Lindsay
Loma Linda
Lomita
Long Beach
Los Alamitos
Lynwood
Malibu
Mammoth Lakes
Manhattan Beach
Maywood
McFarland
Mission Viejo
Monrovia
Montclair
Montebello
Monterey Park
Moorpark
Moreno Valley
Murrieta
Newport Beach
Norco
Norwalk
Ojai
Ontario
Orange
Oxnard
Palm Desert
Palm Springs
Palmdale
Palos Verdes Estates
Paramount
Perris
Pico Rivera
Placentia
Pomona
Port Hueneme
Porterville
Rancho Cucamonga
Rancho Mirage
Rancho Palos Verdes
Rancho Santa Margarita
Redlands
Redondo Beach
Rialto
Ridgecrest
Rolling Hills
Rolling Hills Estates
Rosemead
San Bernardino
San Buenaventura
San Dimas
San Fernando
San Gabriel
San Jacinto
San Marino
Santa Ana
Santa Barbara
Santa Clarita
Santa Fe Springs
Santa Monica
Santa Paula
Seal Beach
Sierra Madre
Signal Hill
Simi Valley
South El Monte
South Gate
South Pasadena
Stanton
Tehachapi
Temecula
Temple City
Thousand Oaks
Torrance
Tulare
Tustin
Twentynine Palms
Upland
Victorville
Villa Park
Visalia
Walnut
West Covina
West Hollywood
Westlake Village
Westminster
Whittier
Woodlake
Yorba Linda
Yucaipa
Yucca Valley

*SCE provides electric service to a small number of customer accounts in Tuolumne County and is not subject to franchise requirements.

APPENDIX C

Appendix C

PRESIDENTIAL SUBSTATION PROJECT SCHEDULE

Proposed Presidential Substation Project Schedule

Date	Event
December 22, 2008	Application filed.
January 21, 2009	Application accepted as complete.
March 2009	Initial Study issued.
August 2009	Draft CEQA document (Negative Declaration, Mitigated Negative Declaration or EIR) issued for comment.
October 2009	Draft decision issued.
December 2009	Final Commission decision issued. Final CEQA document approved.
January 2010	Initiate final engineering, material procurement, right-of-way acquisition, commence construction.
May 2011	Construction complete.
June 2011	Commence operation.

APPENDIX D

Appendix D

NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT

NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT

PRESIDENTIAL SUBSTATION PROJECT
Date: December 22, 2008

Proposed Project: Southern California Edison Company (SCE) has filed an application with the California Public Utilities Commission (CPUC) for a permit to construct (PTC) the Presidential Substation Project (Proposed Project). The Proposed Project includes the following elements:

- Construction of a new 66/16 kilovolt (kV), low-profile distribution substation (Presidential Substation) on an approximately four acre site on the south side of Olsen Road in the City of Thousand Oaks, and abuts the City of Simi Valley boundary (please see map on back of this notice).
- Removal of approximately 79 distribution poles and 5 subtransmission poles located within existing rights-of-way, and replacement with approximately 83 subtransmission poles to accommodate a new 66 kV subtransmission line that would feed the proposed substation from two existing 66 kV subtransmission lines (Moorpark-Royal No. 2 and Moorpark-Thousand Oaks No. 2 66 kV subtransmission lines). Construction of the new subtransmission line would occur within approximately 3.5 miles of existing right-of-way. The new subtransmission line route is as follows:
  - The subtransmission line route originates near the intersection of Read Road and Moorpark Road in unincorporated Ventura County, and extends east along the south side of Read Road within the City of Thousand Oaks, crosses State Highway 23, and continues east to the substation site.
  - The subtransmission line route then exits the substation, trends west along the same route, turns north on Sunset Valley Road in unincorporated Ventura County, and continues to the intersection of Tierra Rejada Road and Sunset Valley Road
- Construction of four new 16 kV distribution getaways at the substation.
- Installation of new fiber optic cable and communication equipment along the subtransmission route to connect the Presidential Substation to SCE's existing telecommunication system.

The purpose of the Proposed Project is to meet forecasted electrical demands in the cities of Simi Valley and Thousand Oaks, as well as adjacent areas of unincorporated Ventura County (Electrical Needs Area). Based on earlier forecasts, SCE had previously stated that projected demand for electrical service in Electrical Needs Area would exceed the capacity at its existing facilities as early as summer of 2010. SCE recently updated its annual electrical forecast for the area, and determined that projected demand for electrical service in the area would instead exceed the capacity at its existing facilities as early as summer of 2011. The region's economic slowdown and overall decline in housing and commercial development has led SCE to a more moderate forecast for electrical demand in the area.

Construction is scheduled to begin in the first quarter of 2010. The Proposed Project is planned to be operational by June 2011.

Environmental Assessment: SCE has prepared a Proponent's Environmental Assessment (PEA), which includes an analysis of potential environmental impacts created by the construction and operation of the proposed project. The PEA concludes that the proposed project would not result in any significant environmental impacts.

EMF Compliance: The CPUC requires utilities to employ "no cost" and "low cost" measures to reduce public exposure to electric and magnetic fields (EMF). In accordance with "EMF Design Guidelines" filed with the CPUC in compliance with CPUC Decisions 93-11-013 and 06-01-042, SCE would implement the following measure(s) for the proposed project:

1. Placing major substation electric equipment (such as transformers) away from the proposed substation property lines;
2. Using pole heights that meet or exceed the Preferred Design criteria as specified in SCE's EMF Design Guidelines in areas where there are residences near the proposed line route;
3. Using "double-circuit" construction that reduces spacing between circuits as compared to single-circuit construction; and
4. Phasing circuits to reduce the magnetic fields.

Public Review Process: SCE has filed an application with the CPUC for a PTC for the proposed project. Pursuant to the CPUC Rules of Practice and Procedure, any affected party may, within 30 days of the date on this notice, (i.e., no later than January 21, 2008), protest, and request that the CPUC hold hearings on the application. If the CPUC as a result of its investigation determines that public hearings should be held, notice shall be sent to each person or entity who is entitled to notice or who has requested a hearing.

All protests must be mailed to the CPUC and SCE concurrently and should include the following:

1. Your name, mailing address, and daytime telephone number.
2. Reference to the Project Name identified above.
3. A clear and concise description of the reason for the protest.

Protest for this Application must be mailed WITHIN 30 CALENDAR DAYS to:

California Public Utilities Commission
Docket Office, Room 2001
505 Van Ness Avenue
San Francisco, CA 94102

AND

Southern California Edison Co.
Law Dept. - Exception Mail
2244 Walnut Grove Avenue
Rosemead, CA 91770
Attention: Cheryl Lawson

AND

California Public Utilities Commission
Director, Energy Division
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

For assistance in filing a protest, please call the CPUC's Public Advisor in San Francisco at (415) 703-2074 or in Los Angeles at (213) 576-7055.

To review a copy of SCE's Application, or to request further information, please contact:

For Simi Valley:

Anna Frutos-Sanchez
Valencia Service Center
25625 W. Rye Canyon Road
Valencia, CA. 91355
Phone: (661) 257-8227
Fax: (661) 257-8297
Anna.Frutossanchez@sce.com

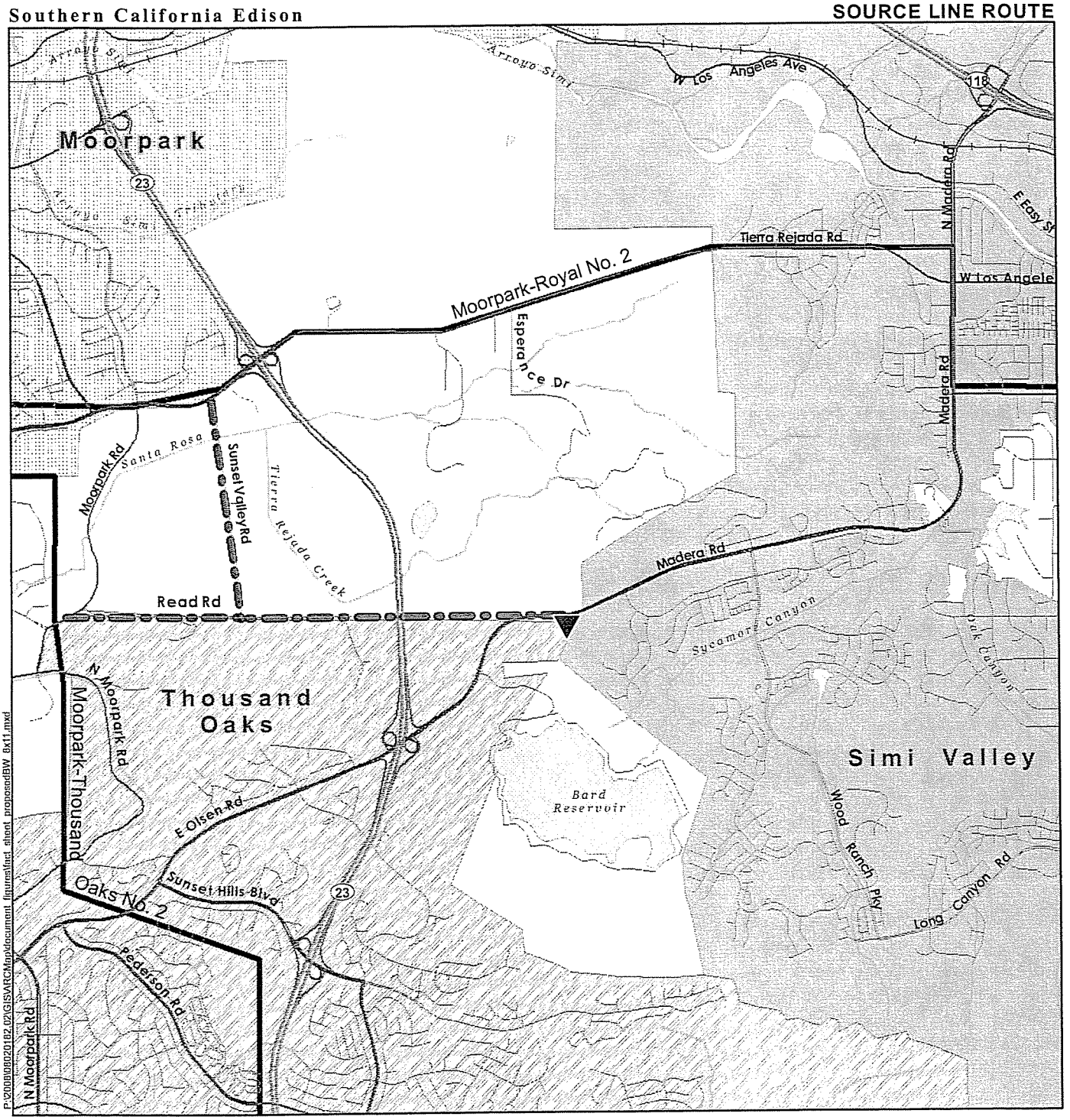
For Thousand Oaks and Unincorporated Areas of Unincorporated Ventura County

Rudy Gonzales
Thousand Oaks Service Center
3589 Foothill Dr.
Thousand Oaks, CA 91362
Phone: (805) 497-5616
Fax: (805) 494-7015
Rudolph.Gonzales@sce.com

PRESIDENTIAL SUBSTATION PROJECT

Southern California Edison

SUBSTATION AND SUBTRANSMISSION SOURCE LINE ROUTE



Substation Source Line Route

- Proposed Route
- Proposed Substation Site

Existing Features

- Existing SCE 66 kV Line

Municipalities

- City of Moorpark
- City of Simi Valley
- City of Thousand Oaks
- Unincorporated Ventura County

0 0.5 1 Miles

EDAW | AECOM ENSR | AECOM

12/15/08

SOUTHERN CALIFORNIA EDISON

An EDISON INTERNATIONAL Company

LIST OF NEWSPAPER(S)
PUBLISHING THE NOTICE OF APPLICATION
FOR A PERMIT TO CONSTRUCT

Ventura County Star
P.O. Box 6006
Camarillo, CA 93011

APPENDIX E

Appendix E

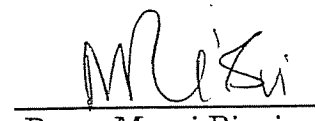
CERTIFICATE OF SERVICE OF NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have this day served a true copy of **SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT PRESIDENTIAL SUBSTATION PROJECT** on all parties identified on the attached service lists(s).

Service was effected by placing copies in properly addressed envelopes and depositing such copies in the United States mail with first class postage prepaid to all parties.

Executed this 22nd Day of December, 2008, at Rosemead, California.



By: Meraj Rizvi

SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770

PRESIDENTIAL SUBSTATION PROJECT AGENCY SERVICE LIST

Peter C. Foy Chairman Ventura County Board of Supervisors 980 Enchanted Way, Suite 203 Simi Valley, CA 93065	Marty Robinson CEO County of Ventura 800 S. Victoria Avenue Ventura, CA 93009	Kim Rodriguez Planning Director Ventura County Planning Division 800 South Victoria Avenue, L-1740 Ventura, CA 93009
Dawnyelle Addison Recording Secretary, Planning Commission Resource Management Agency/Planning Division 800 S. Victoria Avenue Ventura, CA 93009	Mike Sedell City Manager City of Simi Valley 2929 Tapo Canyon Road Simi Valley, CA 93063	Peter Lyons Director, Department of Environmental Services City of Simi Valley 2929 Tapo Canyon Road Simi Valley, CA 93063
Paul Miller Mayor City of Simi Valley 2929 Tapo Canyon Road Simi Valley, CA 93063	Timothy Shannon Chair, Planning Commission City of Simi Valley 2929 Tapo Canyon Road Simi Valley, CA 93063	Scott Mitnick City Manager City of Thousand Oaks 2100 Thousand Oaks Blvd. Thousand Oaks, CA 91362
John Prescott Community Development Director City of Thousand Oaks 2100 Thousand Oaks Blvd. Thousand Oaks, CA 91362	Jacqui V. Irwin Mayor City of Thousand Oaks 2100 Thousand Oaks Blvd. Thousand Oaks, CA 91362	Daryl Reynolds Chair, Planning Commission City of Thousand Oaks 2100 Thousand Oaks Blvd. Thousand Oaks, CA 91362
Gary Cathey, Acting Chief California Department of Transportation Division of Aeronautics, MS # 40 PO Box 942874 Sacramento, CA 94274-0001	Diane Noda, Field Supervisor US Fish & Wildlife Service Region 8, Ventura Office 2493 Portola Road Ventura, CA 93003	Melissa Jones, Executive Director California Energy Commission 1516 Ninth Street Sacramento, CA 95814-5512
Mike Chrisman, Secretary Resources Agency 1416 Ninth St., Suite 1311 Sacramento, CA 95814	Will Kempton, Director California Department of Transportation PO Box 942873 Sacramento, CA 94273-0001	Sandra Shewry, Director Department of Health Services 1501 Capitol Ave., Suite 6001 Sacramento, CA 94234-7320
Dorothy Rice, Executive Director State Water Resources Control Board 1001 "I" Street Sacramento, CA 95814	Donald Koch, Director California Department of Fish and Game 1416 9th Street Sacramento, CA 95814	Michael J. Villegas, Executive Officer Ventura County Air Pollution Control District 669 County Square Drive, Second Floor, Ventura, CA 93003
Douglas R. Failing, District Director California Department of Transportation District 7, Los Angeles and Ventura Counties 100 S. Main Street Los Angeles, CA 90012	California Air Resources Board Attn: Stationary Source 1001 "I" Street PO Box 2815 Sacramento, CA 95812	California Regional Water Quality Control Board Los Angeles Region 4 320 W. Fourth Street, Suite 200 Los Angeles, CA 90013
Ms. Julie Fitch, Energy Division California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102	Ms. Karen Miller, CPUC Public Advisor California Public Utilities Commission 505 Van Ness Avenue, Room 2103 San Francisco, CA 94102	

PRESIDENTIAL SUB T/L ROUTE PROJECT PROPOSED ROUTE #1 300' MAILING LIST ATE: 11/12/2008 REVISION #1

APN	OWNER NAME	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP	SITUS ADDRESS	SITUS CITY/STATE/ZIP	SITUS COUNTY
500-0-392-015	TASH,GEORGE & DEBRA TRUST	5777 BALCOM CANYON	SOMIS	CA	93066	3909 BRENNAN	MOORPARK, CA 93021	VENTURA
500-0-392-085	TASH,GEORGE & DEBRA B TRUST	5777 BALCOM CANYON	SOMIS	CA	93066	3909 BRENNAN	MOORPARK, CA 93021	VENTURA
500-0-393-155	HUMKAR,MOHAMMED M & MAHJAN	290 HAZELRIDGE	SIMI VALLEY	CA	93065	N/A	CA	VENTURA
500-0-393-165	DAY FARMS LLC	10241 NORRIS	PACOIMA	CA	91331	2127 OLSEN	SIMI VALLEY,CA 93065	VENTURA
500-0-410-015	HERRING & CRAMER TRUST	3240 SUNSET VALLEY	MOORPARK	CA	93021	3240 SUNSET VALLEY	MOORPARK, CA 93021	VENTURA
500-0-410-255	UNDERWOOD,CRAIG H FAMILY TRUST	1010 ROSADA	CAMARILLO	CA	93010	READ	MOORPARK,CA 93021	VENTURA
500-0-410-255	UNDERWOOD,CRAIG H FAMILY TRUST	1010 ROSADA	CAMARILLO	CA	93010	READ	MOORPARK, CA 93021	VENTURA
500-0-410-265	SUNSET VALLEY FARMS LLC	5449 ENDEAVOUR	MOORPARK	CA	93021	N/AVAIL	MOORPARK, CA 93021	VENTURA
500-0-410-275	CASSAR,ROBERT H	3566 SUNSET VALLEY	MOORPARK	CA	93021	3530 SUNSET VALLEY	MOORPARK, CA 93021	VENTURA
500-0-410-285	CASSAR,ROBERT H	3566 SUNSET VALLEY	MOORPARK	CA	93021	3566 SUNSET VALLEY	MOORPARK, CA 93021	VENTURA
500-0-410-295	MDC TRUST	3678 SUNSET VALLEY	MOORPARK	CA	93021	N/AVAIL	MOORPARK, CA 93021	VENTURA
500-0-410-315	MDC TRUST	3678 SUNSET VALLEY	MOORPARK	CA	93021	3678 SUNSET VALLEY	MOORPARK, CA 93021	VENTURA
500-0-410-365	UNDERWOOD,CRAIG & SARA TRUST	PO BOX 607	SOMIS	CA	93066	3370 SUNSET VALLEY	MOORPARK, CA 93021	VENTURA
500-0-410-415	BRECUNIER,RICHARD & LINNEA TRU	5191 READ	MOORPARK	CA	93021	15191 READ	MOORPARK,CA 93021	VENTURA
512-0-270-155	MOUNTAINS REC & CNSV AUTHORITY	3750 SOLSTICE CANYON	MALIBU	CA	90265	N/AVAIL	MOORPARK, CA 93021	VENTURA
519-0-160-015	MENDEZ,ALBERT	13037 RIPPLE CREEK	CAMARILLO	CA	93012	13037 RIPPLE CREEK	CAMARILLO,CA 93012	VENTURA
519-0-160-025	HAGE,DAVID J & PAMELA	13025 RIPPLE CREEK	CAMARILLO	CA	93012	13025 RIPPLE CREEK	CAMARILLO,CA 93012	VENTURA
519-0-210-065	BORDIERS NURSERY INC	7231 IRVINE	IRVINE	CA	92618	N/AVAIL	MOORPARK, CA 93021	VENTURA
519-0-210-075	BORDIERS NURSERY INC	7231 IRVINE	IRVINE	CA	92618	3375 SUNSET VALLEY	MOORPARK, CA 93021	VENTURA
519-0-210-085	BORDIERS NURSERY INC	7231 IRVINE	IRVINE	CA	92618	N/A	CA	VENTURA
519-0-210-085	BORDIERS NURSERY INC	7231 IRVINE	IRVINE	CA	92618	3375 SUNSET VALLEY	MOORPARK, CA 93021	VENTURA
580-0-100-675	BRUCE,MARK P & LINDA F	1140 ADIRONDACK	SIMI VALLEY	CA	93065	1066 COUNTRY CLUB	SIMI VALLEY,CA 93065	VENTURA
592-0-101-035	TANNER,JOHN L & MARGARET S TRU	7255 CREST	RANCHO PALOS VERDES	CA	90275	READ	MOORPARK,CA 93021	VENTURA
592-0-101-045	TODESCO,DEZIDERIO & TERESA TRU	331 LAGUNA	SIMI VALLEY	CA	93065	4964 READ	MOORPARK,CA 93021	VENTURA
592-0-101-065	CRANDALL,JENNIFER L	4956 READ	MOORPARK CA	CA	93021	4956 READ	MOORPARK,CA 93021	VENTURA
592-0-101-095	FLEAGANE,JON R & SHARON	4954 READ	MOORPARK	CA	93021	4954 READ	MOORPARK,CA 93021	VENTURA
592-0-101-095	FLEAGANE,JON R & SHARON	4954 READ	MOORPARK	CA	93021	4954 READ	MOORPARK, CA 93021	VENTURA
592-0-101-105	MALLEY,MATTHEW M & SESHAMBAL	4950 READ	MOORPARK	CA	93021	4950 READ	MOORPARK,CA 93021	VENTURA
592-0-101-105	MALLEY,MATTHEW M & SESHAMBAL	4950 READ	MOORPARK	CA	93021	4950 READ	MOORPARK, CA 93021	VENTURA
592-0-101-125	EBRAHIM,MEHR & ASSA	733 BRISTOL	SIMI VALLEY	CA	93065	MOORPARK	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-165	STABEN,TOM & RANA	PO BOX 255	SOMIS	CA	93066	MOORPARK	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-175	CORR,HARVEY R & CAROL R TRUST	4914 READ	MOORPARK	CA	93021	4914 READ	MOORPARK,CA 93021	VENTURA
592-0-101-185	GIBSON,STEVE & MARTHA	4912 READ	MOORPARK	CA	93021	4912 READ	MOORPARK,CA 93021	VENTURA
592-0-101-195	CHU,WILLIAM & TERESA TRUST ETA	1320 MIRAVALLE	LOS ALTOS	CA	94024	MOORPARK	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-205	CHU,WILLIAM & TERESA ETAL	1320 MIRAVALLE	LOS ALTOS	CA	94024	MOORPARK	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-225	JOSEPHSON,MARTIN & CHUREEPORN	4906 READ	MOORPARK	CA	93021	4906 READ	MOORPARK,CA 93021	VENTURA
592-0-101-255	GREWAL,BALJINDER & AVTAR	4904 READ	MOORPARK	CA	93021	4904 READ	MOORPARK,CA 93021	VENTURA
592-0-101-265	STABEN,TOM & RANA	PO BOX 255	SOMIS	CA	93066	4926 MOORPARK	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-275	SINGH,MANINDER PAL LOBANA	4930 READ	MOORPARK	CA	93021	4930 MOORPARK	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-285	STABEN,TOM & RANA	PO BOX 255	SOMIS	CA	93066	4934 MOORPARK	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-295	EATON,JAMES P & JULIE A	PO BOX 7747	THOUSAND OAKS	CA	91359	4938 READ	THOUSAND OAKS,CA 93021	VENTURA
592-0-101-325	VOSKANIAN,RICHARD	4946 READ	MOORPARK	CA	93021	READ	MOORPARK,CA 93021	VENTURA
592-0-101-325	VOSKANIAN,RICHARD	4946 READ	MOORPARK	CA	93021	READ	MOORPARK, CA 93021	VENTURA
592-0-101-335	VOSKANIAN,RICHARD	4946 READ	MOORPARK	CA	93021	4946 READ	MOORPARK,CA 93021	VENTURA
592-0-101-335	VOSKANIAN,RICHARD	4946 READ	MOORPARK	CA	93021	4946 READ	MOORPARK, CA 93021	VENTURA
592-0-101-455	WIDMER,RICHARD R & PATRICIA D	2360 STAFFORD	THOUSAND OAKS	CA	91361	N/A	CA	VENTURA
592-0-101-465	NORDMAN,SUSAN A	21053 DEVONSHIRE	CHATSWORTH	CA	91311	4890 READ	MOORPARK,CA 93021	VENTURA
592-0-250-015	VALDEZ,JOSE & ELIZABETH TRUST	4982 READ	MOORPARK	CA	93021	4982 READ	MOORPARK,CA 93021	VENTURA
592-0-250-025	ANDERSON,CAROL F	4988 READ	MOORPARK	CA	93021	4988 READ	MOORPARK,CA 93021	VENTURA
592-0-250-115	GONZALEZ,RICARDO P	4985 READ	THOUSAND OAKS	CA	93021	4985 READ	MOORPARK,CA 93021	VENTURA
592-0-250-125	READ ROAD LAND COMPANY INC	2049 CENTURY	LOS ANGELES	CA	90067	N/A	CA	VENTURA
592-0-250-135	CAMROSA CO WATER DISTRICT	7385 SANTA ROSA	CAMARILLO	CA	93010	N/A	CA	VENTURA
592-0-250-145	CAMROSA CO WATER DISTRICT	7385 SANTA ROSA	CAMARILLO	CA	93010	N/A	CA	VENTURA
592-0-250-195	THOUSAND OAKS CITY OF	2100 THOUSAND OAKS	THOUSAND OAKS	CA	91362	N/A	CA	VENTURA
592-0-250-205	CHANG,DAVID	1924 MAYA PRADERA	MOORPARK	CA	93021	1924 MAYA PRADERA	MOORPARK,CA 93021	VENTURA
595-0-060-110	VENTURA COUNTY OF	800 VICTORIA	VENTURA	CA	93009	N/A	CA	VENTURA
595-0-060-130	PUBLIC FACILITIES CORP	800 VICTORIA	VENTURA	CA	93009	N/A	CA	VENTURA
595-0-060-190	HUMKAR,MOHAMMED M & MAHJAN	290 HAZELRIDGE	SIMI VALLEY	CA	93065	N/A	CA	VENTURA

SOURCE: COUNTY APPRAISER, VENTURA COUNTY
DATA LAST UPDATED: 07/18/2008
Path: P:\GISData\Projects\2008Proj\2008LE800185997_Pres_Sub_PEA\Data\LR1\LV_LR1.xls

APPENDIX F

Appendix F

FIELD MANAGEMENT PLAN

Presidential Substation Project

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I. EXECUTIVE SUMMARY

This document is Southern California Edison Company's (SCE) Field Management Plan (FMP) for the proposed Presidential Substation Project (Proposed Project).

SCE proposes to construct a new 66/16 kilovolt (kV) substation (Proposed Presidential 66 kV Substation,) and new 66 kV subtransmission lines (Proposed 66 kV subtransmission Lines) to meet forecasted electrical demand in the cities of Thousand Oaks, Simi Valley, and adjacent areas of unincorporated Ventura County. SCE's current forecast shows that projected demand for electrical system in Simi Valley, Thousand Oaks and adjacent areas will exceed SCE's operating capacity at its existing facilities as early as summer of 2011. The project, therefore, would increase electrical capacity to the area, maintain system reliability, and serve the area's projected electrical demand.

SCE provides this FMP in order to inform the public, the California Public Utilities Commission (CPUC), and other interested parties of its evaluation of "no-cost and low-cost" magnetic field reduction design options for this project, and SCE's proposed plan to apply these design options to this project. This FMP has been prepared in accordance with CPUC Decision No. 93-11-013 and Decision No. 06-01-042 relating to extremely low frequency[1] electric and magnetic fields (EMF). This FMP also provides background on the current status of scientific research related to possible health effects of EMF, and a description of the CPUC's EMF policy.

The "no-cost and low-cost" magnetic field reduction design options that are incorporated into the design of the Proposed Project are:

- Utilizing pole heights that meet or exceed the Preferred Design criteria specified in SCE's EMF Design Guidelines in areas where there are residences near the proposed line route;

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1 The extreme low frequency is defined as the frequency range from 3 Hz to 3,000 Hz.

- Using compact type pole-head configurations for the 66 kV single-circuit subtransmission lines;
- Using double-circuit for subtransmission lines for portions of the line route
- Phasing circuits to reduce the magnetic fields; and
- Placing major substation electric equipment (such as transformers) away from the existing substation property lines.

Table 1 on page 6 summarizes "no-cost and low-cost" magnetic field reduction design options that SCE considered for the Proposed Project:

SCE's plan for applying the above "no-cost and low-cost" magnetic field reduction design options for the Proposed Project is consistent with CPUC's EMF policy and with the direction of leading national and international health agencies. Furthermore, the plan complies with SCE's EMF Design Guidelines[2], and with applicable national and state safety standards for new electric facilities.

2 EMF Design Guidelines, August 2006.

Table 1 Summary of "No-cost and Low-cost" Magnetic Field Reduction Design Options

Area No.	Location[3]	Adjacent Land Use[4]	MF Reduction Design Options Considered	Estimated Cost to Adopt	Design Option(s) Adopted? (Yes/No)	Reason(s) if not adopted
Section 1:	From Moorpark-Thousand Oaks No. 2 66 kV Line Tapping point along Read Road to Sunset Valley Road	2, 5, 6	• Taller poles • Phasing Circuits for field reduction (with 16 kV circuit) • Double-circuit Construction	• No-Cost • No-Cost • No-Cost	• Yes • Yes • Yes	
Section 2:	From Moorpark-Royal No. 2 66 kV line tapping point to along Sunset Valley Road to Read Road	5, 6	• Compact Pole-head Design • Taller Poles	• No-Cost • No-Cost	• Yes	
Section 3:	From intersection of Read Road and Sunset Valley along Read Road to Proposed Substation	2, 3, 6	• Taller poles • Phasing Circuits for field reduction	• Low-Cost • No-Cost	• Yes • Yes	
Presidential Substation	South of Olsen Road and West of Country Club Drive	3, 6	• Placing major substation electric equipment (such as transformers) away from the existing substation property lines	• No-Cost	• Yes	

3 This column shows the major cross streets, existing subtransmission lines, or substation name as reference points.

4 Land usage codes are as follows: 1) schools, licensed day-cares, and hospitals, 2) residential, 3) commercial/industrial, 4) recreational, 5) agricultural, and 6) undeveloped land.

II. BACKGROUND REGARDING EMF AND PUBLIC HEALTH RESEARCH ON EMF

There are many sources of power frequency[5] electric and magnetic fields, including internal household and building wiring, electrical appliances, and electric power transmission and distribution lines. There have been numerous scientific studies about the potential health effects of EMF. After many years of research, the scientific community has been unable to determine if exposures to EMF cause health hazards. State and federal public health regulatory agencies have determined that setting numeric exposure limits is not appropriate.[6]

Many of the questions about possible connections between EMF exposures and specific diseases have been successfully resolved due to an aggressive international research program. However, potentially important public health questions remain about whether there is a link between EMF exposures and certain diseases, including childhood leukemia and a variety of adult diseases (e.g., adult cancers and miscarriages). As a result, some health authorities have identified magnetic field exposures as a possible human carcinogen. As summarized in greater detail below, these conclusions are consistent with the following published reports: the National Institute of Environmental Health Sciences (NIEHS) 1999[7], the National Radiation Protection Board (NRPB) 2001[8], the International Commission on non-Ionizing Radiation Protection (ICNIRP) 2001, the California Department of Health Services (CDHS) 2002[9], and the International Agency for Research on Cancer (IARC) 2002[10].

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5 In U.S., it is 60 Hertz (Hz).

6 CPUC Decision 06-01-042, p. 6, footnote 10

7 National Institute of Environmental Health Sciences' Report on Health Effects from Exposures to Power-Line frequency Electric and Magnetic Fields. NIH Publication No. 99-4493, June 1999.

8 National Radiological Protection Board, Electromagnetic Fields and the Risk of Cancer. Report of an Advisory Group on Non-ionizing Radiation, Chilton, U.K. 2001

9 California Department of Health Services, An Evaluation of the Possible Risks from Electric and Magnetic Fields from Power Lines, Internal Wiring, Electrical Occupations, and Appliances, June 2002.

10 World Health Organization / International Agency for Research on Cancer, IARC Monographs on the evaluation of carcinogenic risks to humans (2002). Non-ionizing radiation. Part 1: Static and extremely low-frequency (ELF) electric and magnetic fields, IARCPress, Lyon, France: International Agency for Research on Cancer, Monograph, vol. 80, p. 338, 2002

The federal government conducted EMF research as a part of a $45-million research program managed by the NIEHS. This program, known as the EMF RAPID (Research and Public Information Dissemination), submitted its final report to the U.S. Congress on June 15, 1999. The report concluded that:

- "The scientific evidence suggesting that ELF-EMF exposures pose any health risk is weak."[11]
- "The NIEHS concludes that ELF-EMF exposure cannot be recognized as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard."[12]
- "The NIEHS suggests that the level and strength of evidence supporting ELF-EMF exposure as a human health hazard are insufficient to warrant aggressive regulatory actions; thus, we do not recommend actions such as stringent standards on electric appliances and a national program to bury all transmission and distribution lines. Instead, the evidence suggests passive measures such as a continued emphasis on educating both the public and the regulated community on means aimed at reducing exposures. NIEHS suggests that the power industry continue its current practice of siting power lines to reduce exposures and continue to explore ways to reduce the creation of magnetic fields around transmission and distribution lines without creating new hazards."[13]

In 2001, Britain's NRPB arrived at a similar conclusion:

> "After a wide-ranging and thorough review of scientific research, an independent Advisory Group to the Board of NRPB has concluded that the power frequency electromagnetic fields that exist in the vast majority of homes are not a cause of cancer in general. However, some epidemiological studies do indicate a possible small risk of childhood leukemia associated with exposures to unusually high levels of power frequency magnetic fields."[14]

In 2002, three scientists for CDHS concluded:

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11 National Institute of Environmental Health Sciences, NIEHS Report on Health Effects from Exposures to Power-Frequency Electric and Magnetic Fields, p. ii, NIH Publication No. 99-4493, 1999

12 *ibid.*, p. iii

13 *ibid.*, p. 37 - 38

14 NRPB, NRPB Advisory Group on Non-ionizing Radiation Power Frequency Electromagnetic Fields and the Risk of Cancer, NRPB Press Release May 2001

"To one degree or another, all three of the [CDHS] 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 [CDHS] strongly believe that EMFs do not increase the risk of birth defects, or low birth weight.

They [CDHS] 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 [CDHS] 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 a 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, or

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."[15]

Also in 2002, the World Health Organization's (WHO) IARC concluded:

"ELF magnetic fields are possibly carcinogenic to humans"[16], based on consistent statistical associations of high-level residential magnetic fields with a doubling of risk of childhood leukemia...Children who are exposed to residential ELF magnetic fields less than 0.4 microTesla (4.0 milliGauss) have no increased risk for leukemia.... In contrast, "no consistent relationship has been seen in studies of childhood brain tumors or cancers at other sites and residential ELF electric and magnetic fields."[17]

In June of 2007, the WHO issued a report on their multi-year investigation of EMF and the possible health effects. After reviewing scientific data from numerous EMF and human health studies, they concluded:

"Scientific evidence suggesting that everyday, chronic low-intensity (above 0.3-0.4 μT [3-4 mG]) power-frequency magnetic field exposure poses a health risk is based on epidemiological

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15 CDHS, An Evaluation of the Possible Risks From Electric and Magnetic Fields (EMFs) From Power Lines, Internal Wiring, Electrical Occupations and Appliances, p. 3, 2002

16 IARC, Monographs, Part I, Vol. 80, p. 338

17 *ibid.*, p. 332 - 334

studies demonstrating a consistent pattern of increased risk for childhood leukaemia."[18]

"In addition, virtually 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. Thus, on balance, the evidence is not strong enough to be considered causal, but sufficiently strong to remain a concern."[19]

"A number of other diseases have been investigated for possible association with ELF magnetic field exposure. These include cancers in both children and adults, depression, suicide, reproductive dysfunction, developmental disorders, immunological modifications and neurological disease. The scientific evidence supporting a linkage between ELF magnetic fields and any of these diseases is much weaker than for childhood leukaemia and in some cases (for example, for cardiovascular disease or breast cancer) the evidence is sufficient to give confidence that magnetic fields do not cause the disease"[20]

"Furthermore, given both the weakness of the evidence for a link between exposure to ELF magnetic fields and childhood leukaemia, and the limited impact on public health if there is a link, the benefits of exposure reduction on health are unclear. Thus the costs of precautionary measures should be very low."[21]

III. APPLICATION OF THE CPUC'S "NO-COST AND LOW-COST" EMF POLICY TO THE PROPOSED PROJECT

Recognizing the scientific uncertainty over the connection between EMF exposures and health effects, the CPUC adopted a policy that addresses public concern over EMF with a combination of education, information, and precaution-based approaches. Specifically, Decision 93-11-013 established a precautionary based "no-cost and low-cost" EMF policy for California's regulated electric utilities based on recognition that scientific research had not demonstrated that

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18 WHO, Environmental Health Criteria 238, EXTREMELY LOW FREQUENCY FIELDS, p. 11 - 12, 2007

19 *ibid.*, p. 12

20 *ibid.*, p. 12

21 *ibid.*, p. 13

exposures to EMF cause health hazards and that it was inappropriate to set numeric standards that would limit exposure.

In 2006, the CPUC completed its review and update of its EMF Policy in Decision 06-01-042. This decision reaffirmed the finding that state and federal public health regulatory agencies have not established a direct link between exposure to EMF and human health effects,[22] and the policy direction that (1) use of numeric exposure limits was not appropriate in setting utility design guidelines to address EMF,[23] and (2) existing "no-cost and low-cost" precautionary-based EMF policy should be continued for proposed electrical facilities. The decision also reaffirmed that EMF concerns brought up during Certificate of Public Convenience and Necessity (CPCN) and Permit to Construct (PTC) proceedings for electric and transmission and substation facilities should be limited to the utility's compliance with the CPUC's "no-cost and low-cost" policies.[24]

The decision directed regulated utilities to hold a workshop to develop standard approaches for EMF Design Guidelines and such a workshop was held on February 21, 2006. Consistent design guidelines have been developed that describe the routine magnetic field reduction measures that regulated California electric utilities consider for new and upgraded transmission line and transmission substation projects. SCE filed its revised EMF Design Guidelines with the CPUC on July 26, 2006.

"No-cost and low-cost" measures to reduce magnetic fields would be implemented for this project in accordance with SCE's EMF Design Guidelines. In summary, the process of

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22 CPUC Decision 06-01-042, Conclusion of Law No. 5, mimeo. p. 19 ("As discussed in the rulemaking, a direct link between exposure to EMF and human health effects has yet to be proven despite numerous studies including a study ordered by this Commission and conducted by DHS.").

23 CPUC Decision 06-01-042, mimeo. p. 17 - 18 ("Furthermore, we do not request that utilities include non-routine mitigation measures, or other mitigation measures that are based on numeric values of EMF exposure, in revised design guidelines or apply mitigation measures to reconfigurations or relocations of less than 2,000 feet, the distance under which exemptions apply under GO 131-D. Non-routine mitigation measures should only be considered under unique circumstances.").

24 CPUC Decision 06-01-042, Conclusion of Law No. 2, ("EMF concerns in future CPCN and PTC proceedings for electric and transmission and substation facilities should be limited to the utility's compliance with the Commission's low-cost/no-cost policies.").

evaluating "no-cost and low-cost" magnetic field reduction measures and prioritizing within and between land usage classes considers the following:

1. SCE's priority in the design of any electrical facility is public and employee safety. Without exception, design and construction of an electric power system must comply with all applicable federal, state, and local regulations, applicable safety codes, and each electric utility's construction standards. Furthermore, transmission and subtransmission lines and substations must be constructed so that they can operate reliably at their design capacity. Their design must be compatible with other facilities in the area and the cost to operate and maintain the facilities must be reasonable.

2. As a supplement to Step 1, SCE follows the CPUC's direction to undertake "no-cost and low-cost" magnetic field reduction measures for new and upgraded electrical facilities. Any proposed "no-cost and low-cost" magnetic field measures, must, however, meet the requirements described in Step 1 above. The CPUC defines "no-cost and low-cost" measures as follows:

   - Low-cost measures, in aggregate, should:
     - Cost in the range of 4 percent of the total project cost.
     - Result in magnetic field reductions of "15% or greater at the utility ROW [right-of-way]..."[25]

The CPUC Decision stated,

> "We direct the utilities to use 4 percent as a benchmark in developing their EMF mitigation guidelines. We will not establish 4 percent as an absolute cap at this time because we do not want to arbitrarily eliminate a potential measure that might be available but costs

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25 CPUC Decision 06-01-042, p. 10

more than the 4 percent figure. Conversely, the utilities are encouraged to use effective measures that cost less than 4 percent."[26]

3. The CPUC provided further policy direction in Decision 06-01-042, stating that, "[a]lthough equal mitigation for an entire class is a desirable goal, we will not limit the spending of EMF mitigation to zero on the basis that not all class members can benefit."[27] While Decision 06-01-042 directs the utilities to favor schools, day-care facilities and hospitals over residential areas when applying low-cost magnetic field reduction measures, prioritization within a class can be difficult on a project case-by-case basis because schools, day-care facilities, and hospitals are often integrated into residential areas, and many licensed day-care facilities are housed in private homes, and can be easily moved from one location to another. Therefore, it may be practical for public schools, licensed day-care centers, hospitals, and residential land uses to be grouped together to receive highest prioritization for low-cost magnetic field reduction measures. Commercial and industrial areas may be grouped as a second priority group, followed by recreational and agricultural areas as the third group. Low-cost magnetic field reduction measures will not be considered for undeveloped land, such as open space, state and national parks, and Bureau of Land Management and U.S. Forest Service lands. When spending for low-cost measures would otherwise disallow equitable magnetic field reduction for all areas within a single land-use class, prioritization can be achieved by considering location and/or density of permanently occupied structures on lands adjacent to the projects, as appropriate.

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26 CPUC Decision 93-11-013, § 3.3.2, p.10.

27 CPUC Decision 06-01-042, p. 10

This FMP contains descriptions of various magnetic field models and the calculated results of magnetic field levels based on those models. These calculated results are provided only for purposes of identifying the relative differences in magnetic field levels among various transmission or subtransmission line design alternatives under a specific set of modeling assumptions and determining whether particular design alternatives can achieve magnetic field level reductions of 15 percent or more. The calculated results are not intended to be predictors of the actual magnetic field levels at any given time or at any specific location if and when the project is constructed. This is because magnetic field levels depend upon a variety of variables, including load growth, customer electricity usage, and other factors beyond SCE's control. The CPUC affirmed this in D. 06-01-042 stating:

> "Our [CPUC] review of the modeling methodology provided in the utility [EMF] design guidelines indicates that it accomplishes its purpose, which is to measure the relative differences between alternative mitigation measures. Thus, the modeling indicates relative differences in magnetic field reductions between different transmission line construction methods, but does not measure actual environmental magnetic fields."[28]

VI. PROJECT DESCRIPTION

SCE proposes to construct the Proposed Project to meet forecasted electrical demands in the cities of Simi Valley and Thousand Oaks, as well as adjacent areas of unincorporated Ventura County. The Proposed Project would include the following components:

- A new 66/16 kV distribution substation on an approximate three acre parcel
- Two new 66 kV subtransmission line segments (approximately 3.5 miles long) that would feed the proposed substation from existing 66 kV subtransmission lines
- Four new 16 kV distribution getaways
- Two new 66 kV sub-transmission getaways

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[28] CPUC Decision 06-01-042, p. 11

The Proposed Project is planned to be operational June 2011 to ensure that safe and reliable electric service is available to serve customer electrical demand.

Figure 1 below shows the overall project areas showing the proposed substation site as well as proposed subtransmission line routes (Proposed Routes). SCE's proposed substation site is located on the south side of Olsen Road in the City of Thousand Oaks. The Proposed 66 kV Subtransmission Source Line Route is approximately 3.5 mile and connects two existing subtransmission lines to two new subtransmission source lines.

The first source line would connect to the Moorpark-Thousand Oaks No. 2 66 kV subtransmission line near the intersection of Read Road and Moorpark Road in unincorporated Ventura County. This subtransmission source line would extend east along the south side of Read Road to the intersection of Read Road and Sunset Valley Road

The second subtransmission source line would connect to the Moorpark-Royal No. 2 66 kV subtransmission line near the intersection Tierra Rejada Road and Sunset Valley Road in unincorporated Ventura County. This subtransmission source line would extend south along Sunset Valley Road until it reaches the intersection of Sunset Valley Road and Read Road.

The two subtransmission lines would meet at the intersection of Read Road and Sunset Valley Road within the City of Thousand Oaks. From this intersection the subtransmission lines will continue on the same pole line, cross State Highway 23 and continue east within the same ROW corridor into the substation site.

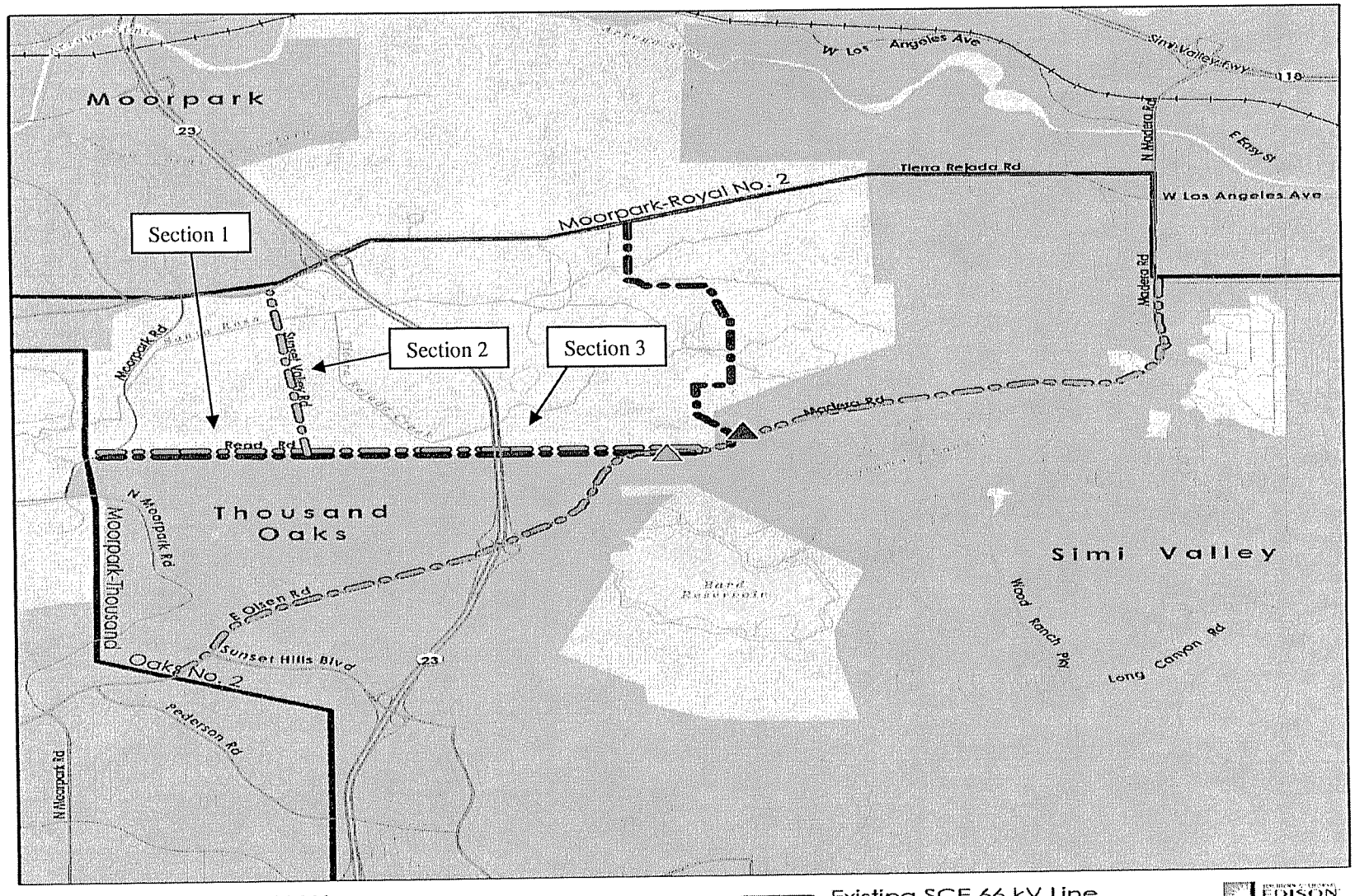
For the purpose of analyzing possible field reduction, the line routes will be broken up into three sections as follows:

- Section 1: Along Read Road from the intersection of Read Road and Moorpark Road to the intersection of Read Road and Sunset Valley Road

- Section 2: Along Sunset Valley Road from the intersection of Tierra Rejada Road and Sunset Valley Road to the intersection of Sunset Valley and Read Road

- Section 3: Along Read Road from the intersection of Sunset Valley Road and Read Road to the proposed substation

Figure 1. Project Area and Proposed Routes



Currently, there are no schools along the Proposed Routes. The Proposed Routes run adjacent to few scattered homes in mainly agricultural areas. The Proposed Substation location is approximately 350 feet, property line to property line, from a preschool/ day-care center[29]. This distance exceeds the California Department of Education setback guidance for new schools of 100 feet for 66 kV facilities.

The total cost of this project is approximately $35.8 million in 2008 constant dollars[30]. Four percent of the proposed project cost is $1.4 million. SCE engineers added magnetic field reduction measures early in the design phase for this project. The total project cost, therefore, includes "low-cost" magnetic field reduction measures in the proposed designs.

V. EVALUATION OF "NO-COST AND LOW-COST" MAGNETIC FIELD REDUCTION DESIGN OPTIONS

For the purpose of evaluating "no-cost and low-cost" magnetic field reduction design options, the Proposed Project is divided into two parts:

- Part 1: Proposed 66 kV Subtransmission Lines
- Part 2: Proposed Presidential 66 kV Substation

Part 1: Proposed 66 kV Subtransmission Lines

After ten years of evaluating and implementing no-cost and low-cost magnetic field reduction design options for subtransmission line designs, SCE established preferred overhead 66 kV and 115 kV subtransmission line designs in 2004. These preferred designs incorporate the most effective no-cost and low-cost magnetic field reduction design options (such as pole-head configurations and taller poles). For overhead 66 kV subtransmission lines, SCE's preferred designs[31] are shown in Table 2:

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29 Tutor Time Learning Center, 1080 Country Club Drive, Simi Valley

30 This is an order of magnitude estimate, prepared in advance of final engineering and prior to CPUC approval. Pension and benefits, administrative and general expenses, and allowance for funds used during construction (approximately 17 percent of project cost) are not included in this estimate.

31 Exceptions to the "preferred design" are recommended by the primary designer based on engineering & safety requirements.

Table 2. Preferred Overhead 66 kV Subtransmission Line Designs with Most Effective Magnetic Field Reduction Design Options Incorporated		
	66 kV Overhead Construction	
	Single Circuit Design	Double Circuit Design
Base Pole Height	70 feet	75 feet
Base Pole-head Configuration	"Triangle" or equivalent	"Double-Circuit"
Minimum Clearance	35 feet	35 feet

Please note that following magnetic field models and the calculated results of magnetic field levels are intended only for purposes of identifying the relative differences in magnetic field levels among various subtransmission line design alternatives under a specific set of modeling assumptions (see §VII-Appendix A for more detailed information about the calculation assumptions and loading conditions) and determining whether particular subtransmission design alternatives can achieve magnetic field level reductions of 15 percent or more. The calculated results are not intended to be predictors of the actual magnetic field levels at any given time or at any specific location when the project is constructed.

Section 1

The typical proposed double-circuit 66 kV overhead subtransmission design (Proposed Design) used for Section 1 is shown on Figure 2. The proposed 66 kV subtransmission line is double-circuited with an existing 16 kV distribution line for Segment 1. The typical pole height for this section is 80 ft.

No-Cost Field Reduction Measures: The proposed design for Section 1 includes the following no-cost field reduction measure:

1. Phasing the proposed 66 kV circuit to reduce the magnetic fields (with existing 16 kV circuit)
2. Using double-circuit construction that reduces spacing between circuits as compared with single-circuit construction

3. Using of pole heights that exceed SCE's preferred design

Low-Cost Field Reduction Options: This design utilizes pole heights that exceed the SCE preferred design; therefore, use of taller poles was not investigated. Additionally, due to raptor protection, use of a more compact double-circuit design was not investigated.

Magnetic Field Calculations: Figure 3 and Table 3 show the calculated magnetic field levels for proposed design. These calculations were made using the typical pole height of 80 feet for the proposed Section 1 structures.

Figure 2. Proposed 66 kV Designs for Section 1

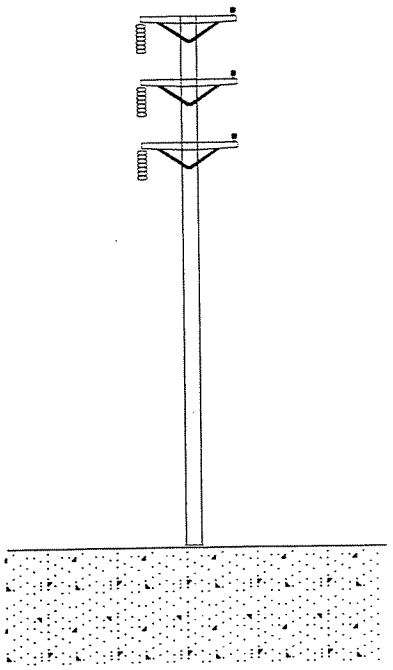

Figure 3. A Design Comparison of Calculated Magnetic Field Levels[32] For Section 1 (Along Read Road Route to Sunset Valley Road)

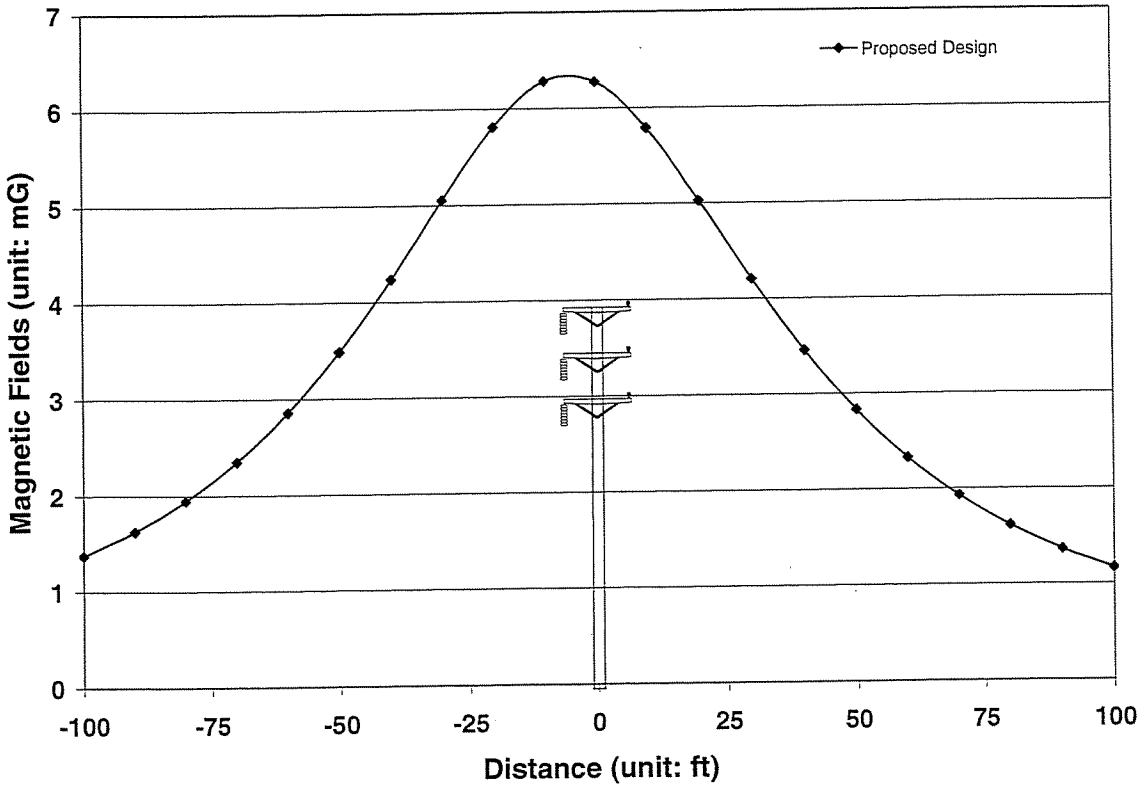

Table 3. A Comparison of Calculated Magnetic Fields[33] for Section 1 (Along Read **Road** Route to Sunset Valley Road)

Design Options	10 ft. North of Center Line (mG)	% Reduction	10 ft. South of Center Line (mG)	% Reduction
Proposed Design	6.3	N/A	5.8	N/A

32 This graph depicts calculated magnetic field levels for design comparison only and is not meant to predict actual magnetic field levels.

33 This table lists calculated magnetic field levels for design comparison only and is not meant to predict actual magnetic field levels.

Section 2

The typical proposed single-circuit 66 kV overhead subtransmission design (Proposed Design) used for Section 2 is shown on Figure 4. The typical pole height for this section is 70 ft.

No-Cost Field Reduction Measures: The proposed design for Section 2 includes the following no-cost field reduction measure:

1. Using poles heights that meet SCE's preferred design
2. Selecting compact pole-head configurations with reduced phase-to-phase distance

Low-Cost Field Reduction Options: This design meets the SCE preferred design; therefore, low-cost measures were not investigated for Segment 2.

Magnetic Field Calculations: Figure 5 and Table 4 show the calculated magnetic field levels for the proposed design. These calculations were made using the typical pole height of 70 feet for the proposed Section 2 structures.

Figure 4. Proposed 66 kV Designs for Section 2

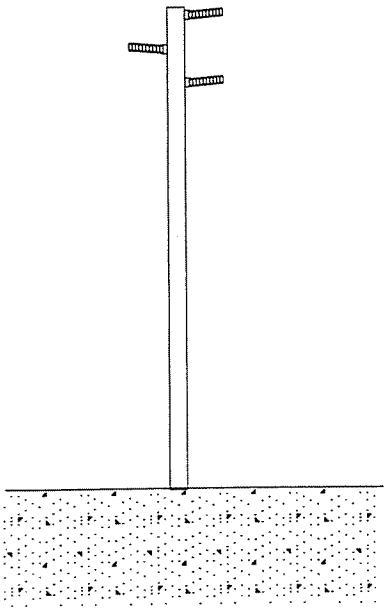

Figure 5. A Design Comparison of Calculated Magnetic Field Levels[34]
Section 2 (Along Sunset Valley Route to Read Road)

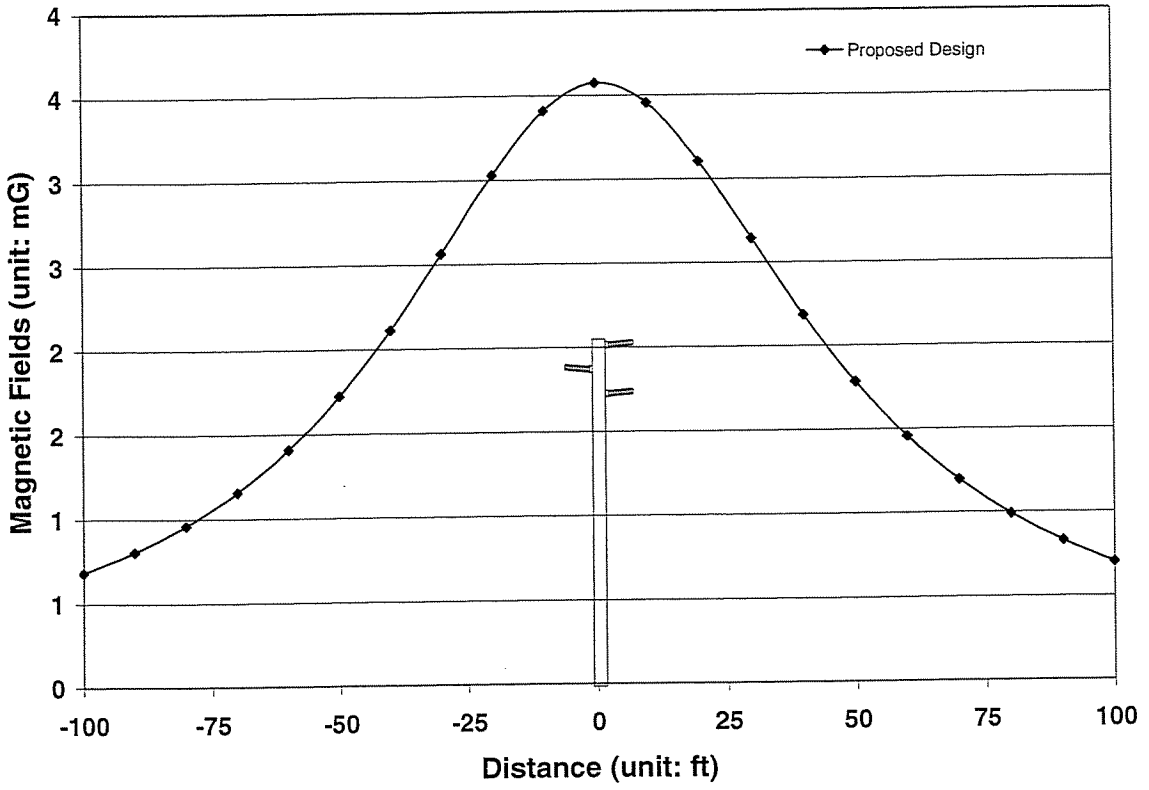

Table 4. A Comparison of Calculated Magnetic Fields[35] for Section 2 (Along Sunset Valley Route to Read Road)				
Design Options	10 ft East of Center Line (mG)	% Reduction	10 ft. West of Center Line (mG)	% Reduction
Proposed Design	3.4	N/A	3.5	N/A

34 This graph depicts calculated magnetic field levels for design comparison only and is not meant to predict actual magnetic field levels.

35 This table lists calculated magnetic field levels for design comparison only and is not meant to predict actual magnetic field levels.

Section 3

The typical proposed double-circuit 66 kV overhead subtransmission design (Proposed Design) for Section 3 is shown on Figure 6. The typical pole height for this section is 70 ft.

No-Cost Field Reduction Measures: The proposed design for Section 3 includes the following no-cost field reduction measure:

1. Phasing circuits to reduce the magnetic fields
2. Using double-circuit construction that reduces spacing between circuits as compared with single-circuit construction

Low-Cost Field Reduction Options: The following low-cost field reduction option was considered for the proposed design for Section 3:

1. Selecting pole heights to meet the preferred design of 75-foot engineered steel pole in residential areas along the line route

Magnetic Field Calculations: Figure 7 and Table 5 show the calculated magnetic field levels for the proposed scenario utilizing 70-foot poles and proposed with low-cost field reduction option scenario using 5 foot taller poles. The design using 5 foot taller poles, 75-foot, meets the preferred double-circuit design as listed in Table 2 and results in calculated field reductions greater than 15% compared with the proposed design without taller structures. Therefore, this design is recommended to be utilized in areas along Section 3 where there are nearby residences.

Figure 6. Proposed 66 kV Design for Section 3

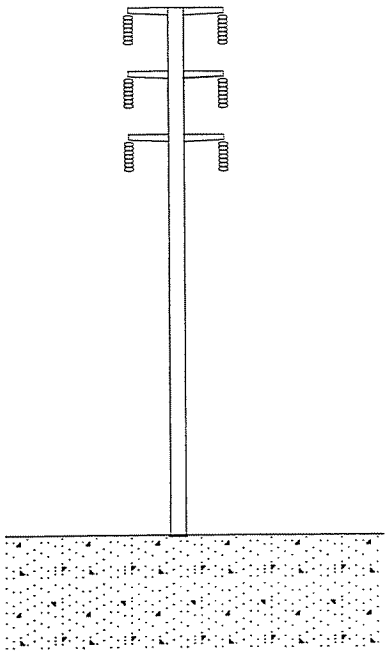

Figure 7. A Design Comparison of Calculated Magnetic Field Levels[36] For Section 3 (Along Read Road Route from Sunset Valley Road to the Proposed Substation)

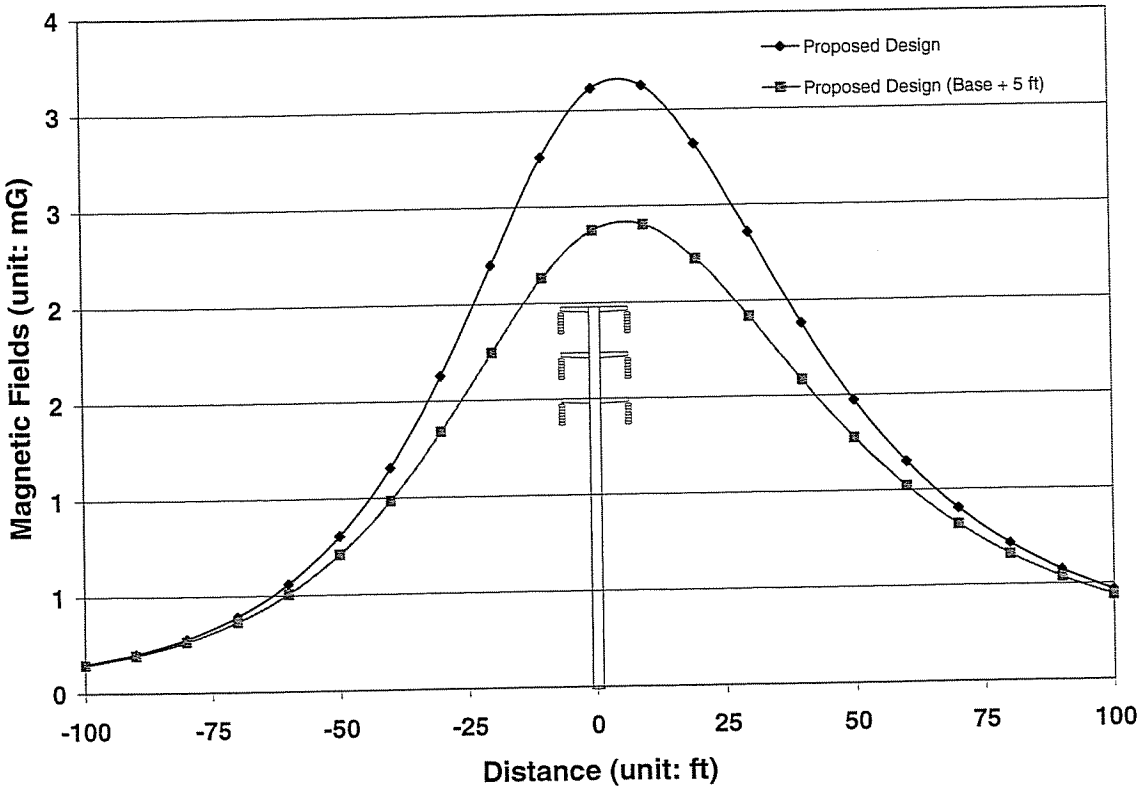

Table 5. A Comparison of Calculated Magnetic Fields[37] for Section 3 (Along Read Road Route from Sunset Valley Crossing Road to the Proposed Substation)

Design Options	10 ft. North of Center Line (mG)	% Reduction	10 ft. South of Center Line (mG)	% Reduction
Proposed Design	2.8		3.1	

36 This graph depicts calculated magnetic field levels for design comparison only and is not meant to predict actual magnetic field levels.

37 This table lists calculated magnetic field levels for design comparison only and is not meant to predict actual magnetic field levels.

Table 5. A Comparison of Calculated Magnetic Fields[37] for Section 3 (Along Read Road Route from Sunset Valley Crossing Road to the Proposed Substation)				
Design Options	10 ft. North of Center Line (mG)	% Reduction	10 ft. South of Center Line (mG)	% Reduction
Proposed Design with Low-Cost Field Reduction (5 ft taller pole)	2.1	25	2.4	22.6

Part 2: Proposed Presidential 66 kV Substation

Generally, magnetic field values along the substation perimeter are low compared to the substation interior because of the distance from the perimeter to the energized equipment. Normally, the highest magnetic field values around the perimeter of a substation result from overhead power lines and underground duct banks entering and leaving the substation, and are not caused by substation equipment. Therefore, the magnetic field reduction design options generally applicable to a substation project are as follows:

- Site selection for a new substation;
- Setback of substation structures and major substation equipment (such as bus, transformers, and underground cable duct banks, etc.) from perimeter;
- Field reduction for subtransmission lines and distribution lines entering and exiting the substation.

The Substation Checklist, as shown on Table 6, is used for evaluating the no-cost and low-cost design options considered for the substation project, the design options adopted, and reasons that certain design options were not adopted.

Table 6. Substation Checklist for Examining No-cost and Low-cost Magnetic Field Reduction Design Options			
No.	**No-Cost and Low-Cost Magnetic Field Reduction Design Options Evaluated for a Substation Project**	**Design Options Adopted? (Yes/No)**	**Reason(s) if not Adopted**
1	Are 66 kV rated transformer(s) 15 feet from the substation property line?	Yes	
2	Are 66 kV rated switch-racks, capacitor banks & bus 8 feet (or more) from the substation property line?	Yes	
3	Are 16 kV distribution underground cable duct banks 12 feet (or more) from the side property line?	Yes	
4	Are 66 kV rated transfer & operating buses configured with the transfer bus facing the nearest property line?	Yes	

This FMP includes only "no-cost and low-cost" magnetic field reduction design options for SCE's Proposed Routes and Proposed Substation site. SCE's Proponent's Environmental Assessment (PEA) contains various alternative line routes and substation site(s). Comparable "no-cost and low-cost" magnetic field reduction options for the Proposed Project can be applied to all alternative subtransmission routes and substation sites. A revised FMP will be prepared should an alternative route be approved.

VI. FINAL RECOMMENDATIONS FOR IMPLEMENTING "NO-COST AND LOW-COST" MAGNETIC FIELD REDUCTION DESIGN OPTIONS

In accordance with the "EMF Design Guidelines", filed with the CPUC in compliance with CPUC Decisions 93-11-013 and 06-01-042, SCE would implement the following "no-cost

and low-cost" magnetic field reduction design options for this project. These recommended magnetic field reduction design options would be Proposed Project:

For Proposed 66 kV Subtransmission Line Routes Sections 1:

- Utilizing pole heights that meet the Preferred Design criteria specified in SCE's EMF Design Guidelines in areas where there are residences near the proposed line route
- Using double-circuit construction that reduces spacing between circuits as compared with single-circuit construction
- Phasing circuits to reduce the magnetic fields (BAC-ABC or equivalent):
    - Moorpark-Presidential-Thousand Oaks 66 kV:- BAC (top to bottom)
    - Brennan 16 kV – ABC (top to bottom)

For Proposed 66 kV Subtransmission Line Routes Section 2:

- Selecting compact pole-head configurations with reduced phase-to-phase distance
- Using poles heights that meet SCE's preferred design

For Proposed 66 kV Subtransmission Line Routes Section 3:

- Utilizing 75 foot pole heights that meet the Preferred Design criteria specified in SCE's EMF Design Guidelines in areas where there are residences near the proposed line route
- Using double-circuit construction that reduces spacing between circuits as compared with single-circuit construction
- Phasing circuits to reduce the magnetic fields (BAC-CAB or equivalent):
    - Moorpark-Presidential-Thousand Oaks 66 kV - BAC (top to bottom)
    - Moorpark-Presidential-Royal 66 kV – CAB (top to bottom)

For Proposed Presidential 66 kV Substation:

- Placing major substation electric equipment (such as transformers) away from the existing substation property lines

The recommended "no-cost and low-cost" magnetic field reduction design options listed above are based upon preliminary engineering designs, and therefore, they are subject to change during the final engineering designs. If the final engineering designs are different than preliminary engineering designs, SCE, however, would implement comparable "no-cost and low-cost" magnetic field reduction design options. If the final engineering designs are significantly different (in the context of evaluating and implementing CPUC's "no-cost and low-cost" EMF Policy) than the preliminary designs, a supplemental FMP will be prepared.

SCE's plan for applying the above "no-cost and low-cost" magnetic field reduction design options uniformly for the Proposed Project is consistent with the CPUC's EMF Decisions No. 93-11-013 and No. 06-01-042, and also with recommendations made by the U.S. National Institute of Environmental Health Sciences. Furthermore, the recommendations above meet the CPUC approved EMF Design Guidelines as well as all applicable national and state safety standards for new electric facilities.

VII. APPENDIX A: TWO-DIMENSIONAL MODEL ASSUMPTIONS AND YEAR 2011 FORECASTED LOADING CONDITIONS

Magnetic Field Assumptions:

SCE' uses a computer program titled "MFields"[38] to model the magnetic field characteristics of various subtransmission designs options. All magnetic field models and the calculated results of magnetic field levels presented in this document are intended only for purposes of identifying the relative differences in magnetic field levels among various subtransmission line design alternatives under a specific set of modeling assumptions and determining whether particular subtransmission design alternatives can achieve magnetic field level reductions of 15 percent or more. The calculated results are not intended to be predictors of the actual magnetic field levels at any given time or at any specific location if and when the project is constructed.

Typical two-dimensional magnetic field modeling assumptions include:

- All subtransmission lines would be considered operating at forecasted loads, see Table 7 below and all conductors are straight and infinitely long;
- A 5 ft sag for all subtransmission designs;
- Magnetic field strength is calculated at a height of three feet above ground;
- Resultant magnetic fields are being used;
- All line currents are balanced (i.e. neutral or ground currents are not considered);
- Terrain is flat; and
- Dominant power flow directions are being used.

38 Kim, C, MFields for Excel, Version 2.0, 2007.

Table 7 Year 2011 Forecasted Loading Conditions for Proposed 66 kV Subtransmission Lines and Existing 16 kV Line	
Circuit Name	**Current (Amp)**
Moorpark-Presidential-Thousand Oaks 66 kV	180
Moorpark-Presidential-Royal 66 kV	150
Brennan 16 kV	5

Note:

1. The power flow direction is from other substations to Presidential Substation.
2. Forecasted loading data is based upon scenarios representing load forecasts for the year 2011. The forecasting data is subject to change depending upon availability of generations, load increase, changes in load demand, and by many other factors.

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have this day served a true copy of **SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) APPLICATION FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES WITH VOLTAGES BETWEEN 50 KV AND 200 KV: PRESIDENTIAL SUBSTATION PROJECT** on the identified below. Service was effected by placing the copies in properly addressed sealed envelopes and causing such envelopes to be delivred via overnight courier to the offices of the following individuals.

Angela K. Minkin
Chief Administrative Law Judge
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Melissa Jones
Executive Director
California Energy Commission
1516 9th Street, MS3-39
Sacramento, CA 95814-5512

Executed this 22nd Day of December, 2008, at Rosemead, California.

By: Meraj Rizvi

SOUTHERN CALIFORNIA EDISON COMPANY

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Post Office Box 800
Rosemead, California 91770