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: Lakeview Substation Project	)))))	Application No. _____ (Filed September 17, 2010)

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

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Dated: September 17, 2010

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I.

INTRODUCTION

Pursuant to California Public Utilities Commission (Commission or CPUC) General Order 131D (GO 131D), 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 Lakeview Substation Project (Project). The Project consists of: (1) a new 115/12 kilovolt (kV) substation; (2) two new 115 kV subtransmission line segments to serve the new substation; (3) two new underground 12 kV distribution getaways; (4) facilities to connect the substation to SCE's existing telecommunications system, and upgrades to the telecommunications equipment at various substations; and (5) the decommissioning of Nuevo Substation and Model Pole Top Substation.

II.

BACKGROUND AND SUMMARY OF REQUEST

SCE's Nuevo 33/12 kV Substation and Model Pole-Top (P.T.) Substation provide electrical service to approximately 1,800 metered customers within the community of Lakeview

and adjacent areas of unincorporated southwestern Riverside County (the Electrical Needs Area). Currently, the amount of electrical power that can be delivered to the Electrical Needs Area is limited to the maximum amount of demand that the Nuevo Substation can serve before its operating capacity limits are exceeded: 16.1 MVA under normal operating conditions. SCE projected in 2007 that the peak electrical demand during 1-in-10 year heat storm conditions would exceed the planned maximum operating limit of Nuevo Substation by 2.0 MVA in 2009. Consequently, SCE built a new temporary pole-top transformer, the Model P.T. Substation, as an interim measure to meet the immediate capacity need in the Electrical Needs Area. The Model P.T. Substation, which was built next to the Nuevo Substation, provides an additional 10 MVA of temporary capacity to the Electrical Needs Area until an additional substation could be built (i.e. the Project). The combined maximum operating capacity of the Nuevo Substation and Model P.T. Substation is currently limited to 26.1 MVA. Based on the historical peak demand values in 2007 and 2008, Nuevo Substation would have been over its maximum operating limit both years had 1-in-10 year heat storm conditions occurred.

In 2009, the recorded normal condition peak demand for the Nuevo Substation and Model P.T. Substation was collectively 14.1 MVA. The 2009 peak demand, as adjusted for a 1-in-10 year heat storm, was 15.5 MVA. By 2013, the peak demand for a 1-in-10 year heat storm is forecasted to be 24.9 MVA. Although the combined capacity is not projected to be exceeded until 2014, the capacity of Nuevo Substation (without the temporary mitigation measure provided by the Model P.T. Substation) is projected to be exceeded each year until the Project is constructed. Thus, additional electrical facilities are required to serve the Electrical Needs Area.

Construction of the Project will ensure that safe and reliable electric service is available to meet customer electrical demand without overloading the existing electric facilities that supply western Riverside County. This would be accomplished by providing: (1) load relief to the Nuevo Substation; (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.

The estimated cost of the Lakeview Substation Project is approximately $50 million in 2010 constant dollars.[1] SCE's cost estimate is for the proposed project described and analyzed in the PEA. The cost estimate does not include costs for mitigation measures above and beyond those measures proposed by the Applicant in the Proponent's Environmental Assessment (PEA) or Field Management Plan (FMP), nor does it include any CPUC-developed alternative(s). Should the Commission choose alternative route(s) or site(s) for the project, or order additional mitigation measure(s) (e.g., different construction methods, types of technologies, or other changes), these additional mitigation measures or alternative(s) may affect the project's cost.

A 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[2] pursuant to GO 131D 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 scheduled to begin in June 2012 and to be completed by May 2013. 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 This is a conceptual 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 are not included in this estimate.

2 Other required information for a PTC application (e.g. SCE's Balance Sheet and Articles of Incorporation) 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:

Kelly O'Donnell
Senior Attorney
Southern California Edison Company
Post Office Box 800
Rosemead, California 91770
Phone: (626) 302-4411
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) 302-1063
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[3] 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 and statement of income as of June 30, 2010. 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

[3] Application No. 93-06-22, filed June 15, 1993, regarding approval of a Self-Generation Deferral Agreement between Mobil Oil Corporation's Torrance Refinery and SCE.

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[4], 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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[4] SCE provides electric service to a small number of customer accounts in Tuolumne County and is not subject to franchise requirements.

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

Much of the information required to be included in a PTC application pursuant to GO 131D, 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 131D, 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 is described and illustrated in Section 2.2.2.1 and Figure 2.1. The alternative substation site is described and illustrated in Section 2.2.2.2 and Figure 2.1.

- The physical characteristics of the substation and equipment are described and illustrated in Section 3.1.1 and Figure 3.1. The physical characteristics of the 115 kV subtransmission source lines are described and illustrated in Section 3.1.2 and Figure 3.2. The physical characteristics of the distribution line getaways are described in Section 3.1.1.12.

- 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.

- Regional and Project area maps are provided in the PEA as Figures 1.1, 2.1, and 4.4-1.

- Maps of current land use including designation of parks, recreational, and scenic areas are provided as Figures 4.2-1 and 4.2-2.

- Maps showing the proximity of the proposed subtransmission source lines to existing electrical transmission and power lines are provided as Figures 2.1 and 3.2.

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 Section 2.2.2.

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 County of Riverside in November 2008. These representatives include: Supervisor Marion Ashley and his staff, as well as Ron Goldman, County of Riverside Planning Director. Project information was presented and sites were discussed. A written statement from the County of Riverside dated March 23, 2010 is attached to the PEA in Appendix D.

- On March 19, 2009 and January 21, 2010, SCE gave presentations to the Lakeview-Nuevo Municipal Advisory Council, which is comprised of local residents. SCE subsequently sent follow-up information to the Council. A written statement from the Council dated March 18, 2010 is attached to the PEA in Appendix D.

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.

- The PEA is attached to this Application.

G. Compliance With GO 131D, Section X

GO 131D, 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 131D; and (2) issuance of a PTC authorizing SCE to construct the Project.

SCE proposes the following schedule for this Application:

September 17, 2010	Application filed.
October 15, 2010	Application accepted as complete.
December 2010	Initial Study issued.
July 2011	Draft CEQA document (Negative Declaration, Mitigated Negative Declaration or EIR) issued for comment.
September 2011	Draft decision issued.
November 2011	Final Commission decision issued. Final CEQA document approved.

I. Statutory Authority

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

J. Public Notice

Pursuant to GO 131D, 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 131D. 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 F and the attached PEA listed below are made a part of this Application:

- Appendix A: Balance Sheet and Statement of Income as of June 30, 2010
- Appendix B: List of Counties and Municipalities Served by SCE
- Appendix C: Lakeview 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 131D, 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 131D, Section IX.B.6.

Moreover, as addressed in the same subsection of GO 131D, 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.[5/]

[5/] D.95-08-038, Appendix A, p. 25.

IV.

CONCLUSION

SCE respectfully requests the Commission to issue a PTC authorizing SCE to construct the Lakeview 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

/s/ Les Starck
By: Les Starck
Vice President

September 17, 2010

/s/ Kelly O'Donnell
By: Kelly O'Donnell
Attorney for
SOUTHERN CALIFORNIA EDISON COMPANY
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Telephone: (626) 302-4411
Facsimile: (626) 302-1926

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 27th day of August 2010, at Rosemead, California.

/s/ Les Starck

Les Starck
Vice President
SOUTHERN CALIFORNIA EDISON COMPANY
Telephone: (626) 302-4883

Appendix A

BALANCE SHEET AND STATEMENT OF INCOME

AS OF JUNE 30, 2010

SOUTHERN CALIFORNIA EDISON COMPANY

BALANCE SHEET

JUNE 30, 2010

A S S E T S

(Unaudited)

(Millions of Dollars)

UTILITY PLANT:	
Utility plant, at original cost	$26,070
Less - Accumulated depreciation	(6,047)
	20,023
Construction work in progress	2,682
Nuclear fuel, at amortized cost	339
	23,044
OTHER PROPERTY AND INVESTMENTS:	
Nonutility property - less accumulated depreciation of $95	68
Nuclear decommissioning trusts	3,083
Other Investments	82
	3,233
CURRENT ASSETS:	
Cash and equivalents	85
Short-term investments	6
Receivables, less allowances of $53 for uncollectible accounts	731
Accrued unbilled revenue	542
Inventory	323
Prepaid taxes	200
Derivative assets	78
Regulatory assets	338
Other current assets	51
	2,354
DEFERRED CHARGES:	
Regulatory assets	5,058
Derivative assets	197
Other long-term assets	327
	5,582
	$34,213

SOUTHERN CALIFORNIA EDISON COMPANY

BALANCE SHEET

JUNE 30, 2010

CAPITALIZATION AND LIABILITIES

(Unaudited)

(Millions of Dollars)

CAPITALIZATION:	
Common stock	$2,168
Additional paid-in capital	561
Accumulated other comprehensive loss	(17)
Retained Earnings	5,204
Common shareholder's equity	7,916
Preferred and preference stock not subject to redemption requirements	920
Long-term debt	7,129
	15,965
CURRENT LIABILITIES:	
Short-term debt	215
Accounts payable	971
Accrued taxes	31
Accrued interest	180
Customer deposits	229
Derivative liabilities	179
Regulatory liabilities	457
Deferred income taxes	52
Other current liabilities	445
	2,759
DEFERRED CREDITS:	
Deferred income taxes	3,959
Deferred investment tax credits	94
Customer advances	124
Derivative liabilities	1,188
Pensions and benefits	1,725
Asset retirement obligations	3,278
Regulatory liabilities	3,391
Other deferred credits and other long-term liabilities	1,730
	15,489
	$34,213

SOUTHERN CALIFORNIA EDISON COMPANY

STATEMENT OF INCOME

6 MONTHS ENDED JUNE 30, 2010

(Unaudited)

(Millions of Dollars)

OPERATING REVENUE	$4,406
OPERATING EXPENSES:	
Fuel	175
Purchased power	1,220
Other operation and maintenance	1,468
Depreciation, decommissioning and amortization	629
Property and other taxes	130
Total operating expenses	3,622
OPERATING INCOME	784
Interest income	3
Other income	70
Interest expense - net of amounts capitalized	(206)
Other expenses	(26)
INCOME BEFORE INCOME TAX	625
INCOME TAX EXPENSE	134
NET INCOME	491
Less: Dividends on preferred and preference stock not subject to mandatory redemption	26
NET INCOME AVAILABLE FOR COMMON STOCK	$465

Appendix B

LIST OF COUNTIES AND MUNICIPALITIES

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

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

LAKEVIEW SUBSTATION PROJECT SCHEDULE

Proposed Lakeview Substation Project Schedule

Date	Event
September 17, 2010	Application filed.
October 15, 2010	Application accepted as complete.
December 2010	Initial Study issued.
July 2011	Draft CEQA document (Negative Declaration, Mitigated Negative Declaration or EIR) issued for comment.
September 2011	Draft decision issued.
November 2011	Final Commission decision issued. Final CEQA document approved.
June 2012	Commence construction.
May 2013	Construction complete.
June 2013	Commence operation.

Appendix D

NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT

NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT

LAKEVIEW SUBSTATION PROJECT
Date: September 17, 2010

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

- Construction of a new 115/12 kV substation (Lakeview Substation). Lakeview Substation would be an unattended, automated 56 MVA 115/12 kV low-profile substation located on a 5.4-acre parcel in unincorporated Riverside County, more specifically the community of Lakeview;

- Installation of two new 115 kV subtransmission source line segments to connect the proposed Lakeview Substation to the existing Valley-Moval 115 kV subtransmission line;

- Construction of two new underground 12 kV distribution getaways;

- Installation of telecommunications facilities at the proposed Lakeview Substation, inclusive of telecommunication cable (overhead and underground) to connect the proposed Lakeview Substation to the SCE telecommunications network, and upgrades to the telecommunications equipment at the various substations; and

- Decommissioning of both Nuevo Substation and Model Pole Top Substation.

Construction is scheduled to begin in the second quarter of 2012. The Proposed Project is scheduled to be operational in June 2013 to ensure that reliable electric service is available to serve customer electric demand.

Environmental Assessment: SCE has prepared a Proponent's Environmental Assessment (PEA) which includes analysis of potential environmental impacts that could be created by the construction and operation of the Proposed Project. The PEA concludes that with the implementation of Applicant-Proposed Measures, the majority of the potential significant environmental effects associated with the Proposed Project would be reduced to less-than-significant levels. However, impacts to agricultural and forestry resources and air quality would remain significant and unavoidable.

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

1. Utilizing subtransmission structure heights that meet or exceed SCE's preferred EMF design criteria;
2. Utilizing subtransmission line construction that reduces the space between conductors compared with other designs;

3. Placing major substation electrical equipment (such as transformers, switchracks, buses, and underground duct banks) away from the substation property lines; and
4. Configuring the transfer and operating buses with the transfer bus closest to the nearest property line.

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 September 27, 2010), 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; and
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 Ave., 4th Fl. San Francisco, CA 94102	**AND**	Southern California Edison Co. Law Dept. - Exception Mail 2244 Walnut Grove Ave. Rosemead, CA 91770 Attention: Yolanda Leon	**AND**	California Public Utilities Commission Director, Energy Division 505 Van Ness Ave. 4th Fl. 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 Lakeview/Nuevo, CA:

Louis Davis
Region Manager,
Southern California Edison Company
Phone 951-249-8468
FAX 951-249-8653
Louis.Davis@sce.com

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

The Press-Enterprise
3450 Fourteenth St.
Riverside, CA 92501

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 the **NOTICE OF APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES WITH VOLTAGES BETWEEN 50 KV AND 200 KV: LAKEVIEW SUBSTATION PROJECT** on all parties identified on the attached service list(s). Service was effected by placing the copies in properly addressed and sealed envelopes and depositing such envelopes in U.S. mail with first-class postage prepaid to all parties.

Executed this 17th day of September, 2010, at Rosemead, California.

/s/ Meraj Rizvi_____
Meraj Rizvi
Project Analyst
SOUTHERN CALIFORNIA EDISON COMPANY

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

LAKEVIEW PROJECT AGENCY SERVICE LIST

Public Involvement Contacts		
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Lakeview Substation Project
300ft. Ownership List

APN	OWNER NAME	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	Site Address	Site City	Site State	Site Zip Code	ACRES	LANDUSE DESC	LANDUSE CATEGORY
307-110-007	FIESTA STONERIDGE	11 TALCOTT NOTCH RD	FARMINGTON	CT	6032	N/AVAIL	N/AVAIL	CA	N/AVAIL	N/AVAIL	AGRICULTURAL LAND	VACANT LAND
307-110-009	MWD	PO BOX 54153	LOS ANGELES	CA	90054	N/AVAIL	PERRIS	CA	92571	5	RESIDENTIAL LOT	VACANT LAND
307-120-001	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	PERRIS	CA	92571	3.58	AGRICULTURAL LAND	VACANT LAND
307-120-002	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	PERRIS	CA	92571	71.89	AGRICULTURAL LAND	VACANT LAND
307-120-003	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	PERRIS	CA	92571	11.57	AGRICULTURAL LAND	VACANT LAND
307-120-004	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	PERRIS	CA	92571	147.84	AGRICULTURAL LAND	VACANT LAND
307-120-007	RIVERSIDE COUNTY FLOOD CONTROL	1995 MARKET ST	RIVERSIDE	CA	92501	N/AVAIL	PERRIS	CA	92571	24.1	RESIDENTIAL LOT	VACANT LAND
307-120-008	LAUDA,FRANK STEWARD	12534 HARLOW AVE	RIVERSIDE	CA	92503	N/AVAIL	PERRIS	CA	92571	6.02	RESIDENTIAL LOT	VACANT LAND
307-130-053	BRITSCHGI REAL ESTATE INV CO	3304 S BRIDGE ST	VISALIA	CA	93277	N/AVAIL	NUEVO	CA	92567	11.2	FARMS	AGRICULTURAL
307-130-055	BRITSCHGI REAL ESTATE INV CO	3304 S BRIDGE ST	VISALIA	CA	93277	N/AVAIL	NUEVO	CA	92567	8.64	FARMS	AGRICULTURAL
307-130-057	BRITSCHGI REAL ESTATE INV CO	3304 S BRIDGE ST	VISALIA	CA	93277	N/AVAIL	NUEVO	CA	92567	8.62	FARMS	AGRICULTURAL
307-130-059	BRITSCHGI REAL ESTATE INV CO	3304 S BRIDGE ST	VISALIA	CA	93277	N/AVAIL	NUEVO	CA	92567	8.72	FARMS	AGRICULTURAL
307-130-061	BRITSCHGI REAL ESTATE INV CO	3304 S BRIDGE ST	VISALIA	CA	93277	N/AVAIL	NUEVO	CA	92567	8.41	FARMS	AGRICULTURAL
307-130-065	BRITSCHGI REAL ESTATE INV CO	3304 S BRIDGE ST	VISALIA	CA	93277	N/AVAIL	NUEVO	CA	92567	12.16	FARMS	AGRICULTURAL
307-130-069	RIVERSIDE COUNTY FLOOD CONT	1995 MARKET ST	RIVERSIDE	CA	92501	N/AVAIL	NUEVO	CA	92567	7.59	VACANT LAND (NEC)	VACANT LAND
307-130-070	LAUDA,FRANK STEWARD	12534 HARLOW AVE	RIVERSIDE	CA	92503	N/AVAIL	NUEVO	CA	92567	18.91	RESIDENTIAL LOT	VACANT LAND
307-130-071	RIVERSIDE COUNTY HABITAT CONSERV AGENCY	4080 LEMON ST 12TH	RIVERSIDE	CA	92501	N/AVAIL	NUEVO	CA	92567	6.13	RESIDENTIAL LOT	VACANT LAND
308-130-002	MWD	PO BOX 54153	LOS ANGELES	CA	90054	N/AVAIL	PERRIS	CA	92571	41.76	RESIDENTIAL LOT	VACANT LAND
308-140-007	NUEVO 106	1 BETTER WORLD CIR 300	TEMECULA	CA	92590	N/AVAIL	PERRIS	CA	92571	17.54	RESIDENTIAL LOT	VACANT LAND
308-140-008	FLOCAL	720 VIA ZAPATA	RIVERSIDE	CA	92507	N/AVAIL	PERRIS	CA	92571	2.29	RESIDENTIAL LOT	VACANT LAND
308-140-009	FLOCAL	720 VIA ZAPATA	RIVERSIDE	CA	92507	N/AVAIL	PERRIS	CA	92571	0.48	RESIDENTIAL LOT	VACANT LAND
308-140-010	FLOCAL	720 VIA ZAPATA	RIVERSIDE	CA	92507	N/AVAIL	PERRIS	CA	92571	3.81	RESIDENTIAL LOT	VACANT LAND
308-140-011	MWD	PO BOX 54153	LOS ANGELES	CA	90054	N/AVAIL	PERRIS	CA	92571	13.59	RESIDENTIAL LOT	VACANT LAND
308-140-012	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	PERRIS	CA	92571	1.3	RESIDENTIAL LOT	VACANT LAND
308-150-008	SWEENEY,WILLIAM R	PO BOX 3369	MANHATTAN BEACH	CA	90266	N/AVAIL	PERRIS	CA	92571	64.5	RESIDENTIAL LOT	VACANT LAND
308-150-009	LAUDA,FRANK STEWARD	12534 HARLOW AVE	RIVERSIDE	CA	92503	N/AVAIL	PERRIS	CA	92571	0.57	RESIDENTIAL LOT	VACANT LAND
308-150-011	MWD	PO BOX 54153	LOS ANGELES	CA	90054	N/AVAIL	PERRIS	CA	92571	11.96	RESIDENTIAL LOT	VACANT LAND
308-150-012	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	PERRIS	CA	92571	8.73	RESIDENTIAL LOT	VACANT LAND
308-150-014	MWD	PO BOX 54153	LOS ANGELES	CA	90054	N/AVAIL	PERRIS	CA	92571	1.75	RESIDENTIAL LOT	VACANT LAND
426-180-001	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	NUEVO	CA	92567	65.71	FARMS	AGRICULTURAL
426-180-002	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	NUEVO	CA	92567	74.84	FARMS	AGRICULTURAL
426-180-003	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	NUEVO	CA	92567	36.21	FARMS	AGRICULTURAL
426-180-004	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	N/AVAIL	NUEVO	CA	92567	9.1	FARMS	AGRICULTURAL
426-180-005	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	N/AVAIL	NUEVO	CA	92567	10.31	FARMS	AGRICULTURAL
426-180-006	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	N/AVAIL	NUEVO	CA	92567	10.76	FARMS	AGRICULTURAL
426-180-007	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	N/AVAIL	NUEVO	CA	92567	13.26	FARMS	AGRICULTURAL
426-180-008	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	N/AVAIL	NUEVO	CA	92567	11.83	FARMS	AGRICULTURAL
426-180-009	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	N/AVAIL	NUEVO	CA	92567	12.28	FARMS	AGRICULTURAL
426-180-010	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	N/AVAIL	NUEVO	CA	92567	12.29	FARMS	AGRICULTURAL
426-180-011	YBARROLA LIVING TRUST A	73 FERNDALE CT	REDLANDS	CA	92374	29520 11TH ST	NUEVO	CA	92567	11.83	FARMS	AGRICULTURAL
426-420-008	RIVERPARK INVESTORS	1 BETTER WORLD CIR 300	TEMECULA	CA	92590	N/AVAIL	NUEVO	CA	92567	7.92	RESIDENTIAL LOT	VACANT LAND
426-420-009	RIVERSIDE COUNTY FLOOD CONT	1995 MARKET ST	RIVERSIDE	CA	92501	N/AVAIL	NUEVO	CA	92567	2.96	RESIDENTIAL LOT	VACANT LAND
426-430-005	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	NUEVO	CA	92567	33.42	FARMS	AGRICULTURAL
426-440-001	LAUDA,FRANK	614 26TH ST	MANHATTAN BEACH	CA	90266	N/AVAIL	NUEVO	CA	92567	50.57	FARMS	AGRICULTURAL
426-450-003	ZULICK,RONALD L TRUST	PO BOX 1192	NUEVO	CA	92567	30021 RESERVOIR AVE	LAKEVIEW	CA	92567	1.87	SFR	RESIDENTIAL
426-450-004	MANTHEY,LAWRENCE B & TALI M	30490 13TH ST	NUEVO	CA	92567	30099 RESERVOIR AVE	NUEVO	CA	92567	3.41	MOBILE HOME LOT	RESIDENTIAL

Source: Landvision
Parcels:06/25/2009; TaxRoll:09/22/2009; Transactions:11\17\09
Filename: Lakeview LSP 300ft OwnershipList 20100916.xls

Appendix F

FIELD MANAGEMENT PLAN

FOR LAKEVIEW SUBSTATION PROJECT

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

List of Terms

CDHS	California Department of Health Services
C/L	center line
CPCN	Certificate of Public Convenience and Necessity
CPUC	California Public Utilities Commission
ELF	extremely low frequency
EMF	electric and magnetic fields
FMP	field management plan
GO	General Order
IARC	International Agency for Research on Cancer
kV	kilovolt
LWS	light weight steel
mG	milliGauss
MVA	megavolt-ampere
MW	megawatt
NIEHS	National Institute of Environmental Health Sciences
NRPB	National Radiation Protection Board
PEA	Proponents Environmental Assessment
RAPID	Research and Public Information Dissemination
ROW	right of way
SCE	Southern California Edison
T/L	transmission line
TSP	tubular steel pole
VAR	Volt ampere reactive
WHO	World Health Organization

I. Executive Summary

This document is Southern California Edison Company's (SCE) Field Management Plan (FMP) for the proposed Lakeview Substation Project (Proposed Project). SCE proposes to construct a new 115/12 kilovolt (kV) substation called Lakeview Substation (Proposed Substation). The Proposed Project includes the following components:

- A new 115/12 kV distribution substation on an approximately five-acre site;
- Construction of two new 115 kV subtransmission line segments to serve the Proposed Substation (more specifically, the Valley-Moval 115 kV subtransmission line would be looped into the Proposed Substation with two new single-circuit 115 kV subtransmission line segments); and
- Construction of two new underground 12 kV distribution getaways.

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 (ELF)[6] 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 as follows:

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6 The "extremely low" frequency is defined as the frequency range from 3 Hz to 3,000 Hz.

- Utilizing subtransmission structure heights that meet or exceed SCE's preferred EMF design criteria;
- Utilizing subtransmission line construction that reduces the space between conductors compared with other designs;
- Placing major substation electrical equipment (such as transformers, switchracks, buses, and underground duct banks) away from the substation property lines; and
- Configuring the transfer and operating buses with the transfer bus closest to the nearest property line.

The "no-cost and low-cost" magnetic field reduction design options that SCE considered for the Proposed Project are summarized in Table 1 on page 6.

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[7] and with applicable national and state safety standards for new electrical facilities.

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7 EMF Design Guidelines, July 2006.

Table 1. Summary of "No-cost and Low-cost" Magnetic Field Reduction Design Options						
Area No.	**Location**[8]	**Adjacent Land Use**[9]	**MF Reduction Design Options Considered**	**Estimated Cost to Adopt**	**Design Option(s) Adopted? (Yes/No)**	**Reason(s) if not adopted**
Lakeview Substation	Located at the southwest corner of 10th St. and Reservoir Ave, in the community of Lakeview.	5	• Placing major substation electrical equipment (such as transformers, switchracks, buses, and underground duct banks) away from the substation property lines • Configuring the transfer and operating buses with the transfer bus closest to the nearest property line	• No-Cost • No-Cost	• Yes • Yes	
115 kV Source sub-transmission line Segment 1	Northwest of Lakeview Substation	5	• Utilizing subtransmission structure heights that meet or exceed SCE's preferred EMF design criteria • Utilizing subtransmission line construction that reduces the space between conductors compared with other designs	• No-Cost[10] • No-Cost	• Yes • Yes	

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

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

[10] Included in the preliminary design.

Table 1. Summary of "No-cost and Low-cost" Magnetic Field Reduction Design Options						
Area No.	**Location**[8]	**Adjacent Land Use**[9]	**MF Reduction Design Options Considered**	**Estimated Cost to Adopt**	**Design Option(s) Adopted? (Yes/No)**	**Reason(s) if not adopted**
115 kV Source sub-transmission line Segment 2	Southwest of Lakeview Substation	5	• Utilizing subtransmission structure heights that meet or exceed SCE's preferred EMF design criteria • Utilizing subtransmission line construction that reduces the space between conductors compared with other designs	• No-Cost[11] • No-Cost	• Yes • Yes	

[11] *Id.*

II. BACKGROUND REGARDING EMF AND PUBLIC HEALTH RESEARCH

There are many sources of power frequency[12] 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.[13]

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,[14] the National Radiation Protection Board (NRPB) 2001,[15] the International Commission on non-Ionizing Radiation Protection

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12 In the United States, it is 60 Hertz (Hz).

13 D.06-01-042, p. 6, n. 10.

14 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.

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

(ICNIRP) 2001, the California Department of Health Services (CDHS) 2002,[16] the International Agency for Research on Cancer (IARC) 2002,[17] and the World Health Organization (2007).

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:

> "The scientific evidence suggesting that ELF-EMF exposures pose any health risk is weak."[18]
>
> …
>
> "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."[19]
>
> …
>
> "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."[20]

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

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16 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.

17 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.

18 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.

19 *Id*., p. iii.

20 *Id.*, p. 37-38.

"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."[21]

In 2002, three scientists for CDHS concluded:

"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."[22]

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

"ELF magnetic fields are possibly carcinogenic to humans"[23], 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

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

22 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.

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

of childhood brain tumors or cancers at other sites and residential ELF electric and magnetic fields."[24]

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 studies demonstrating a consistent pattern of increased risk for childhood leukaemia."[25]
>
> "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."[26]
>
> "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 leukemia 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"[27]
>
> "Furthermore, given both the weakness of the evidence for a link between exposure to ELF magnetic fields and childhood leukemia, 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."[28]

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24 *Id*., p. 332-334.
25 WHO, Environmental Health Criteria 238, Extremely Low Frequency Fields, p. 11-13, 2007.
26 *Id*., p. 12.
27 *Id*.
28 *Id*., p. 13.

III. APPLICATION OF THE CPUC'S "NO-COST AND LOW-COST" EMF POLICY TO THIS 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 No. (D.) 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 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 D.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,[29] and the policy direction that (1) use of numeric exposure limits was not appropriate in setting utility design guidelines to address EMF,[30] 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

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[29] D.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.").

[30] D.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.").

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.[31]

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 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.

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[31] D.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.").

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 (a) Cost in the range of 4 percent of the total project cost; and (b) result in magnetic field reductions of "15% or greater at the utility R-O-W [right-of-way]…"[32] 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 more than the 4 percent figure. Conversely, the utilities are encouraged to use effective measures that cost less than 4 percent."[33]

3. The CPUC provided further policy direction in D.06-01-042, stating "[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."[34] While D.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

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[32] D.06-01-042, p. 10.
[33] D.93-11-013, § 3.3.2, p.10.

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.

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:

> "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."[35]

Continued from the previous page

[34] D.06-01-042, p. 10.

[35] D.06-01-042, p. 11.

IV. PROJECT DESCRIPTION

SCE proposes to construct a new 115/12 kV, unattended, automated 56 MVA low-profile substation (Lakeview Substation) on a 5.4-acre parcel in unincorporated Riverside County, at the southwest corner of 10th St. and Reservoir Avenue, in the community of Lakeview. (Figure 1) The proposed Lakeview Substation dimensions would be approximately 330 feet by 345 feet, and property limits would be approximately 452 feet by 525 feet. The substation would encompass approximately 2.7 acres of a 5.4-acre parcel, and the power capacity would be expandable to 112 MVA as necessary. The Proposed Project also includes the following components:

- Installation of two new 115 kV subtransmission source line segments to connect the proposed Lakeview Substation to the existing Valley-Moval 115 kV subtransmission line;
    - One segment would be approximately 1.8 miles in length, and would form the new Valley-Lakeview 115 kV subtransmission line; and
    - One segment would be approximately 1.5 miles in length, and would form the new Lakeview-Moval 115 kV subtransmission line.
        - Approximately 73 new wood poles and 17 new Tubular Steel Poles (TSPs) would be installed to accommodate the two new 115 kV subtransmission source line segments; and
- Construction of two new underground 12 kV distribution getaways.

Subtransmission Source Line Description

The new 115 kV subtransmission source line routes consist of two independent single-circuit source line segments that would connect to and divide the existing Valley-Moval 115 kV

transmission line, supplying power to the Proposed Substation. The line segments are described below.

- **Segment 1 - The Lakeview-Moval 115 kV Subtransmission Line**

Segment One would connect to the existing Valley-Moval 115 kV subtransmission line south of the Colorado River Aqueduct. The new 115 kV subtransmission facilities would then extend east, paralleling the Colorado River Aqueduct until it spans the San Jacinto River and intersects and follows the future planned 10th Street. The facilities would then extend southeast along 10th Street until entering the substation property near the corner of 10th Street and Reservoir Avenue. (*See* Figures 1 and 2.) Subtransmission Source Line Segment One is approximately 1.5 miles long.

- **Segment 2 - The Valley-Lakeview 115 kV Subtransmission Line**

Segment Two would connect to the existing Valley-Moval 115 kV subtransmission line south of Segment One. The new 115 kV subtransmission facilities would then extend southeast, spanning the San Jacinto River, before reaching 11th Street. The new facilities would then follow 11th Street to the intersection with Reservoir Avenue, extending north before entering the proposed substation property. (*See* Figures 1 and 3.) Subtransmission Source Line Segment Two is approximately 1.8 miles long.

Figure 1. Project Area and Proposed 115 kV Subtransmission Line Routes and Substation Location

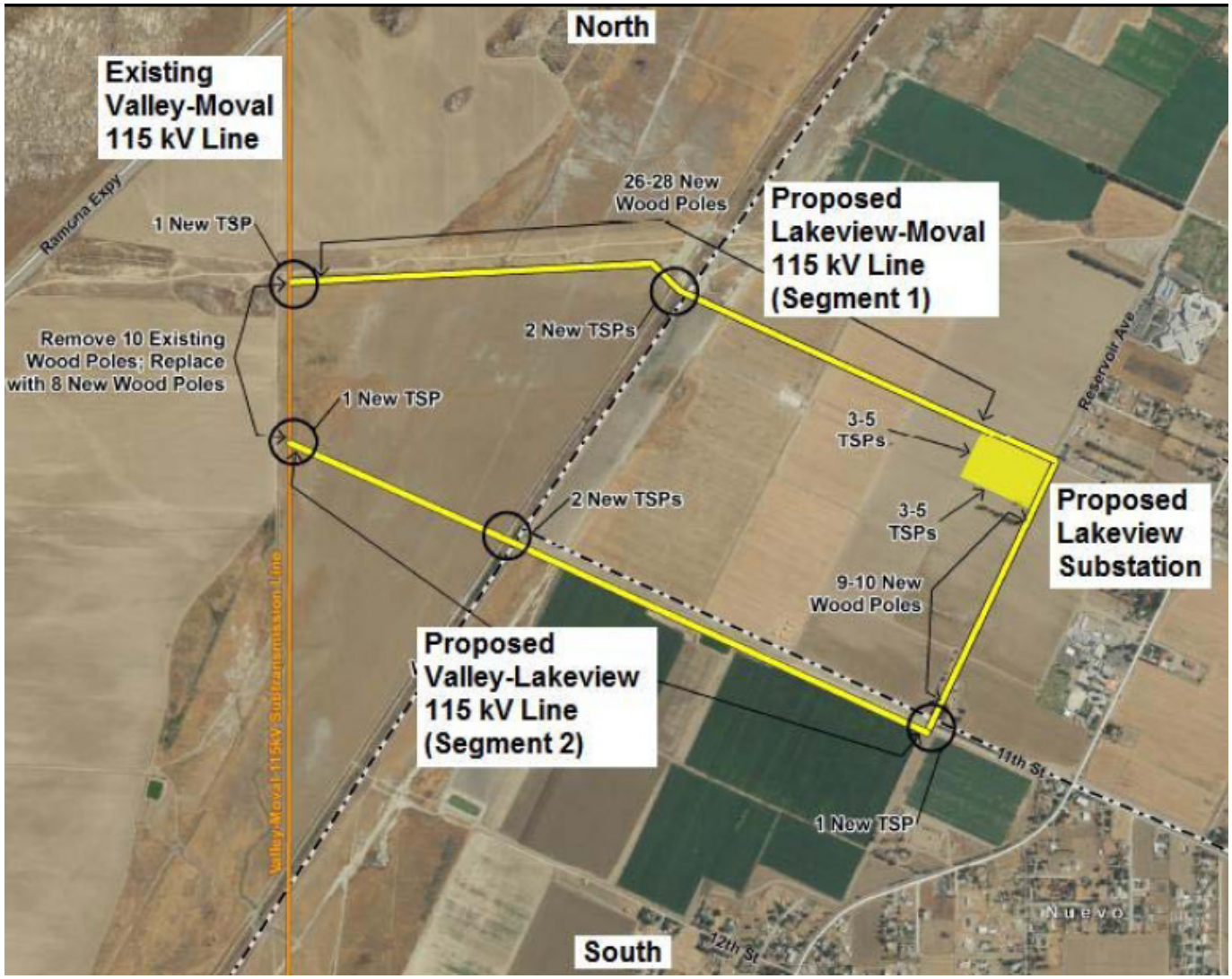


Figure 2. Proposed Lakeview-Moval 115 kV

Single-Circuit Structure Design - Segment 1

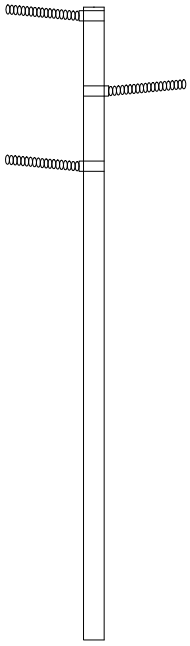
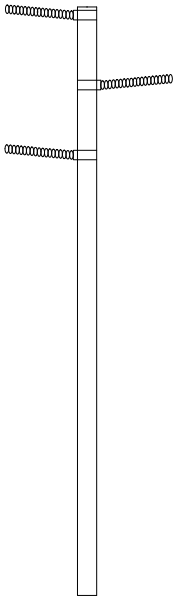


Figure 3. Proposed Valley-Lakeview 115 kV

Single-Circuit Structure Design - Segment 2



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

The 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 and subtransmission line design alternatives under a specific set of modeling assumptions[36] 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 when the Proposed Project is constructed.

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

- Part 1: Proposed Lakeview 115 kV Subtransmission Lines
- Part 2: Lakeview 115/12 kV Substation
- Part 3: Project Alternatives

Part 1: Proposed Lakeview 115 kV Subtransmission Lines

For the purpose of field reduction evaluation, the proposed subtransmission lines will be divided into two segments as follows:

- **Segment 1 - The Proposed Lakeview-Moval 115 kV Line**

The proposed design used for Segment 1 is shown in Figure 2. The proposed 115 kV subtransmission line segment will be constructed on single-circuit structures. Based on preliminary designs, typical wood poles would be at least 70 feet in length (61 feet above ground), and typical tubular steel poles (TSP) would be 70 feet (61 feet above ground) to 85 feet

in height. The structures would be located in utility ROW. For EMF analysis, calculated field levels were evaluated at 10 feet from the center line (C/L) of the structure for a single circuit. Currently, there are no schools or residences adjacent to Segment 1 of the Proposed 115 kV subtransmission line route. The proposed route for Segment 1 runs through agricultural land.

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

1. Utilizing structure heights that meet or exceed SCE's EMF preferred design criteria.
2. Utilizing subtransmission line construction that reduces the space between conductors compared with other designs

Low-Cost Field Reduction Options: Because the proposed design incorporates the above no-cost field reduction measures including structure heights that meet or exceed SCE's EMF preferred design criteria, no further low-cost reduction measures such as utilizing taller structures were considered for this segment of the Proposed Project.

Magnetic Field Calculations: Figure 4 and Table 2 show the calculated magnetic field levels for the proposed design. These calculations were made using the typical proposed wood structure length of 70 feet (61 feet above ground).

Continued from the previous page

[36] *See* Appendix A for more detailed information about the calculation assumptions and loading conditions.

Figure 4. Calculated Magnetic Field Levels[37] for Segment 1 Proposed Lakeview-Moval 115 kV Subtransmission Line

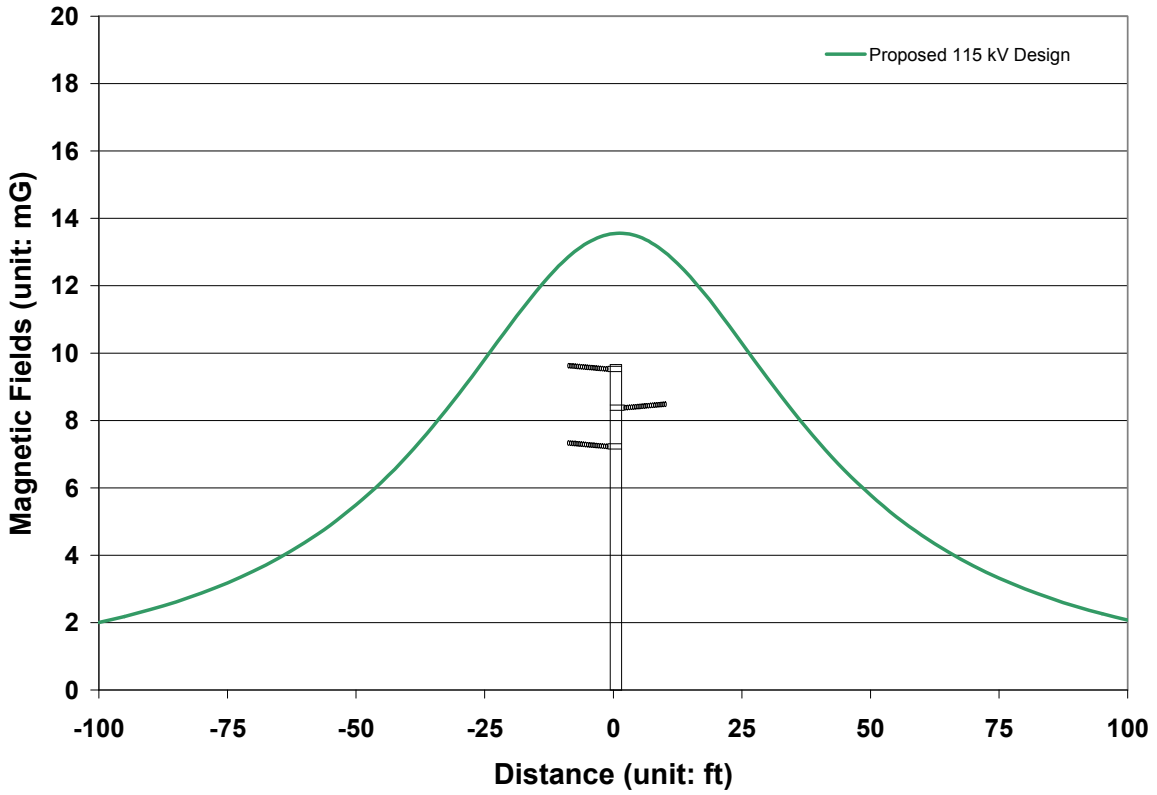


Table 2. Calculated Magnetic Field Levels[38] for Segment 1				
Design Options	10 Feet Left of C/L (mG)	% Reduction	10 Feet Right of C/L (mG)	% Reduction
Proposed Lakeview-Moval 115 kV Line Design	12.7	n/a	13.0	n/a

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

38 *Id*.

Recommendations for Segment 1: *The proposed design includes no-cost field reduction measures. Because the proposed design already incorporates structures with heights meeting or exceeding SCE's preferred design criteria and construction that reduces the space between conductors compared with other designs, no further low-cost field reduction measures are recommended.*

- **Segment 2 - The Proposed Valley-Lakeview 115 kV Subtransmission Line**

The proposed design used for Segment 2 is shown in Figure 3. The proposed 115 kV subtransmission line will be constructed on single-circuit structures. Based on preliminary designs, typical wood poles would be at least 70 feet in length (61 feet above ground), and TSPs will typically be 70 feet (61 feet above ground) to 85 feet in height. The structures will be located in utility ROW. For EMF analysis, calculated field levels were evaluated at 10 feet from the center line of the structure for a single circuit. Currently, there are no schools or residences adjacent to Segment 2 of the proposed 115 kV subtransmission line route. The proposed route for Segment 2 runs through agricultural land.

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

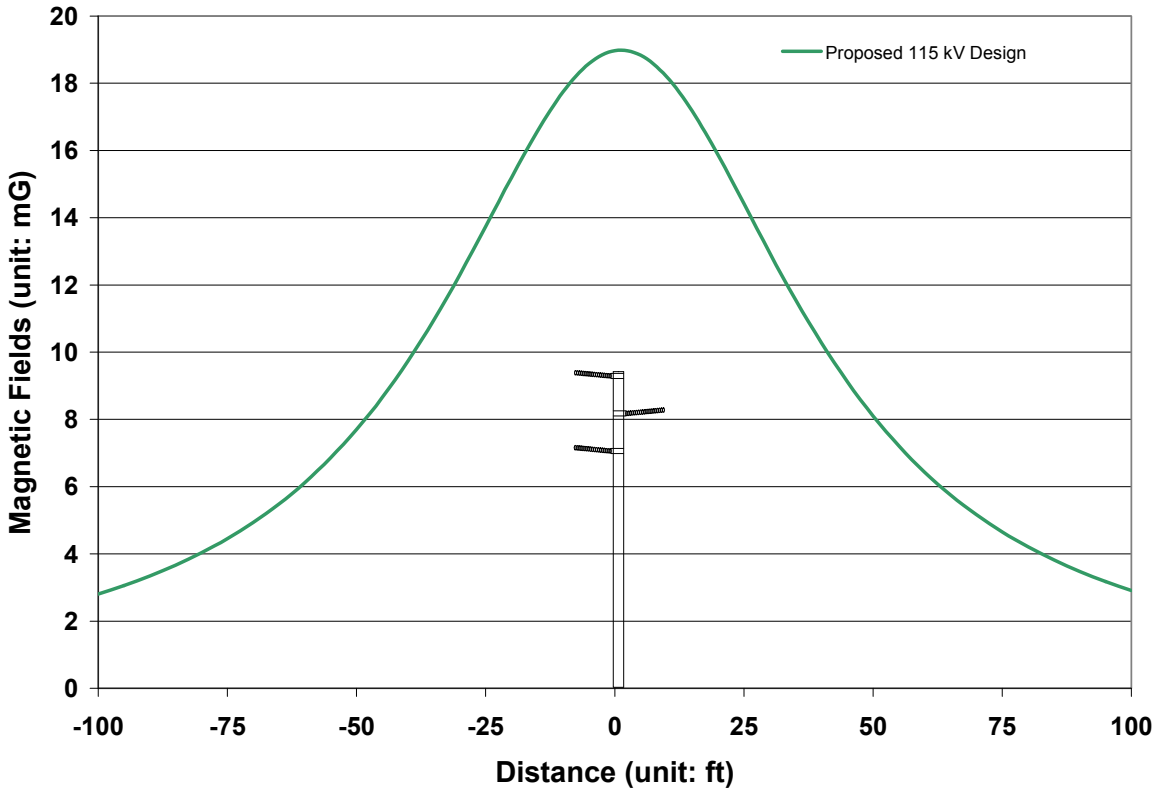
1. Utilizing structure heights that meet or exceed SCE's EMF preferred design criteria; and
2. Utilizing subtransmission line construction that reduces the space between conductors compared with other designs.

Low-Cost Field Reduction Options: Because the proposed design incorporates the above no-cost field reduction measures including structure heights that meet or exceed

SCE's EMF preferred design criteria, no further low-cost reduction measures such as utilizing taller structures were considered for this segment of the Proposed Project.

Magnetic Field Calculations: Figure 5 and Table 3 show the calculated magnetic field levels for proposed design. These calculations were made using the typical proposed wood structure length of 70 feet (61 feet above ground).

Figure 5. Calculated Magnetic Field Levels[39] for Segment 2 Proposed Valley-Lakeview 115 kV Subtransmission Line



[39] *Id.*

Table 3. Calculated Magnetic Field Levels[40] for Segment 2				
Design Options	10 Feet Left of C/L (mG)	% Reduction	10 Feet Right of C/L (mG)	% Reduction
Proposed Valley-Lakeview 115 kV Line Design	17.7	n/a	18.2	n/a

Recommendations for Segment 2: *The proposed design includes no-cost field reduction measures. Because the proposed design already incorporates structures with heights meeting or exceeding SCE's preferred design criteria and construction that reduces the space between conductors compared with other designs, no further low-cost field reduction measures are recommended.*

Part 2: Lakeview 115/12 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; and
- Setback of substation structures and major substation equipment (such as bus, transformers, and underground cable duct banks, etc.) from the perimeter.

The Substation Checklist, as shown in Table 4, 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 if applicable.

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[40] *Id*.

Table 4. Substation Checklist for Examining No-cost and Low-cost Magnetic Field Reduction Design Options			
#	**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 115 kV rated transformer(s) 15 feet from the substation property line?	Yes	
2	Are 115 kV rated switch-racks, capacitor banks & bus 8 feet (or more) from the substation property line?	Yes	
3	Are 115kV rated transfer & operating buses configured with the transfer bus facing the nearest property line?	Yes	
4	Are underground cable duct banks greater than 12 feet from side of property line?	Yes	

Part 3: Project Alternatives

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 Final 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 D.93-11-013 and D.06-01-042, SCE would implement the following "no-cost and low-cost" magnetic field reduction design options for the Proposed Project:

Segment 1 - Proposed Lakeview 115 kV Subtransmission Line Route:

- Utilizing structure heights that meet or exceed SCE's EMF preferred design criteria; and
- Utilizing subtransmission line construction that reduces the space between conductors compared with other designs.

Segment 2 - Proposed Lakeview 115 kV Subtransmission Line Route:

- Utilizing structure heights that meet or exceed SCE's EMF preferred design criteria; and
- Utilizing subtransmission line construction that reduces the space between conductors compared with other designs.

Proposed Lakeview 115/12 kV Substation:

- Placing major substation electrical equipment (such as transformers, switchracks, buses and underground duct banks) away from the substation property lines; and
- Configuring the transfer and operating buses with the transfer bus closest to the nearest property line.

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 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 Final FMP or an Addendum to the 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

(D.93-11-013 and D.06-01-042) and also with recommendations made by the U.S. NIEHS. Furthermore, the recommendations above meet the CPUC-approved EMF Design Guidelines as well as all applicable national and state safety standards for new electrical facilities.

APPENDIX A: TWO-DIMENSIONAL MODEL ASSUMPTIONS AND YEAR 2013 FORECASTED LOADING CONDITIONS

Magnetic Field Model Assumptions

SCE uses a computer program titled "MFields"[41] to model the magnetic field characteristics of various transmission 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 and 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. Typical two-dimensional magnetic field modeling assumptions include:

- All subtransmission lines were modeled using forecasted peak loads. (see Table 5 below)
- All conductors were assumed to be straight and infinitely long.
- Average conductor heights accounted for line sag used in the calculation for the Lakeview-Moval 115 kV and Valley-Lakeview 115 kV subtransmission line designs.
- Magnetic field strength was calculated at a height of three feet above ground.
- Resultant magnetic fields values were presented in this FMP.
- All line currents were assumed to be balanced (i.e. neutral or ground currents are not considered).
- Terrain was assumed to be flat.

- Project dominant power flow directions were used.

Table 5. Year 2013 Forecasted Loading Conditions for Proposed 115 kV Subtransmission Lines		
Circuit Name	**Current (Amps)**	**Power Flow Direction**
Proposed Lakeview-Moval 115 kV Subtransmission Line (Segment 1)	300	Lakeview to Moval
Proposed Valley-Lakeview 115 kV Subtransmission Line (Segment 2)	420	Valley to Lakeview

Notes:

1. Forecasted loading data is based upon scenarios representing load forecasts for the second quarter of 2013. The forecasting data is subject to change depending upon availability of generations, load increase, changes in load demand, and by many other factors.

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41 SCE, MFields for Excel, Version 2.0, 2007.

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 **APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY (U-338-3) FOR A PERMIT TO CONSTRUCT ELECTRICAL FACILITIES WITH VOLTAGES BETWEEN 50 KV AND 200 KV: LAKEVIEW SUBSTATION PROJECT** on the parties identified below. Service was effected by placing the copies in properly addressed sealed envelopes and causing such envelopes to be delivered via overnight courier to the offices of the following individuals:

Karen Clopton
Chief Administrative Law Judge
California Public Utilities Office
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 17th day of September, 2010, at Rosemead, California.

/s/ Meraj Rizvi
Meraj Rizvi
Project Analyst
SOUTHERN CALIFORNIA EDISON COMPANY

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