

TABLE OF CONTENTS

Southern California Edison's Moorpark-Newbury 66 kV Subtransmission Line Project (A.13-10-021) Draft Environmental Impact Report

	<u>Page</u>
Acronyms	vii
Executive Summary	ES-1
ES.1 Introduction	ES-1
ES.2 Alternatives	ES-8
ES.3 Environmental Impacts and Mitigation Measures	ES-10
ES.4 Summary Comparison of the Proposed Project and Alternatives	ES-12
ES.5 Impact Summary Tables	ES-15
1. Introduction	1-1
1.1 Purpose of This Document	1-1
1.2 Project Overview.....	1-1
1.3 Proposed Project Objectives	1-2
1.4 Agency Use of This Document	1-4
1.5 Public Review and Comment.....	1-5
1.6 Reader's Guide to This EIR	1-7
2. Background	2-1
2.1 Introduction	2-1
2.2 CPUC Procedural Activities	2-1
2.3 Past Construction Activities	2-2
2.4 Effects of Past Construction Activities	2-9
3. Project Description	3-1
3.1 Introduction	3-1
3.2 Project Location	3-1
3.3 Existing System	3-2
3.4 Overview of the Proposed Project	3-2
3.5 Proposed Project Components	3-14
3.6 Construction	3-20
3.7 Project Operation and Maintenance	3-36
3.8 Applicant Proposed Measures	3-37
3.9 Electric and Magnetic Fields Summary	3-45

	<u>Page</u>
4. Project Alternatives	4-1
4.1 CEQA Context for the Consideration of Alternatives	4-1
4.2 Alternatives Development and Screening Process	4-2
4.3 Summary of Screening Results	4-6
4.4 Alternatives Evaluated in this EIR.....	4-9
4.5 Alternatives Eliminated from Full EIR Evaluation.....	4-11
5. Environmental Analysis	5-1
Introduction to Environmental Analysis	5-1
5.1 Aesthetics	5.1-1
5.2 Agriculture and Forestry Resources	5.2-1
5.3 Air Quality	5.3-1
5.4 Biological Resources	5.4-1
5.5 Cultural Resources	5.5-1
5.6 Energy Conservation	5.6-1
5.7 Geology and Soils.....	5.7-1
5.8 Greenhouse Gas Emissions	5.8-1
5.9 Hazards and Hazardous Materials.....	5.9-1
5.10 Hydrology and Water Quality	5.10-1
5.11 Land Use and Planning	5.11-1
5.12 Mineral Resources.....	5.12-1
5.13 Noise	5.13-1
5.14 Population and Housing.....	5.14-1
5.15 Public Services	5.15-1
5.16 Recreation	5.16-1
5.17 Transportation and Traffic.....	5.17-1
5.18 Utilities and Service Systems	5.18-1
6. Comparison of Alternatives	6-1
6.1 Comparison Methodology.....	6-1
6.2 Evaluation of Project Alternatives	6-2
6.3 Environmentally Superior Alternative.....	6-3
7. Cumulative Effects	7-1
7.1 Projects Considered in the Cumulative Analysis.....	7-1
7.2 Cumulative Effects Analysis	7-2
8. Other CEQA Considerations	8-1
8.1 Significant Unavoidable Environmental Effects	8-1
8.2 Significant Irreversible Changes	8-1
8.3 Growth-Inducing Effects	8-2
9. Report Preparation	9-1
10. Mitigation Monitoring, Reporting, and Compliance Program	10-1

	<u>Page</u>
Appendices	
A. Scoping Report	A-1
B. Mailing List and Certificate of Service	B-1
C. Field Management Plan	C-1
D. Air Quality and GHG Emission Calculations	D-1
D.1 Criteria Pollutant Emissions.....	D.1-1
D.2 Greenhouse Gas Emissions.....	D.2-1
D.3 SCE Construction Emission Estimates.....	D.3-1

List of Figures

ES-1	Proposed Project Segments and Existing Substations.....	ES-3
2-1	Past Project Area and Index Map.....	2-5
2-2	Past Activities within Segments 1 and 2.....	2-6
2-3	Past Activities within Segments 2 and 3.....	2-7
2-4	Past Activities within Segments 3 and 4.....	2-8
3-1	Proposed Project Segments and Existing Substations.....	3-3
3-2	Electrical Needs Area.....	3-5
3-3	Existing and Proposed Moorpark 66 kV Subtransmission System.....	3-6
3-4	Proposed Project Area and Index Map.....	3-9
3-5	Proposed Activities within Segments 1 and 2.....	3-10
3-6	Proposed Activities within Segments 2 and 3.....	3-11
3-7	Proposed Activities within Segments 3 and 4.....	3-12
3-8	Typical Pole Design.....	3-13
3-9	Marker Ball Dimensions	3-18
3-10	Typical Subtransmission Duct Bank.....	3-19
4-1	Alternative 1, Reconductoring.....	4-13
4-2	Alternative 2, West Side of 220 kV ROW	4-17
4-3	Alternative 3, New 66kV Subtransmission Line Collocated with the Existing Moorpark-Newbury-Pharmacy 66 kV Line	4-21
4-4	Conceptual Tripple-Circuit 66 kV Structure	4-23
4-5	Alternative 4, Reconnect the Camgen Generator to the Moorpark System.....	4-26
5.1-1	Viewpoint Locations and Key Observation Points	5.1-5
5.1-2	Context Photographs.....	5.1-7
5.1-3	Context Photographs.....	5.1-8
5.1-4	Context Photographs.....	5.1-9
5.1-5	Visual Simulation A – State Route 118.....	5.1-22
5.1-6	Visual Simulation B – Santa Rosa Road	5.1-23
5.1-7	Visual Simulation C – Santa Rosa Road	5.1-24
5.1-8	Visual Simulation D – Santa Rosa Valley Road	5.1-25
5.1-9	Visual Simulation E – COSCA-Managed Open Space.....	5.1-26
5.2-1	Farmland in the Proposed Project Area	5.2-3
5.2-2	Williamson Act Land in the Proposed Project Area	5.2-4
5.4-1	Vegetation Communities in the Proposed Project Vicinity for Segments 1 and 2	5.4-3
5.4-2	Vegetation Communities in the Proposed Project Vicinity for Segments 3 and 4	5.4-4
5.4-3	Critical Habitat in the Proposed Project Vicinity	5.4-9
5.4-4	California Coastal Gnatcatcher (CAGN) Suitable Habitat in the Proposed Project Vicinity	5.4-22
5.7-1	Proposed Project Area Soils	5.7-3

	<u>Page</u>
List of Figures (continued)	
5.7-2 Well Boring Locations.....	5.7-4
5.7-3 Seismic Hazards	5.7-9
5.7-4 Erosion Hazard.....	5.7-23
5.9-1 Wildlife Hazards	5.9-5
5.10-1 FEMA Flood Zones and Surface Hydrology in the Proposed Project Vicinity.....	5.10-3
5.10-2 Groundwater Basins in the Proposed Project Vicinity	5.10-5
5.11-1 General Plan Land Use in the Proposed Project Area	5.11-4
5.11-2 Zoning Designations in the Proposed Project Vicinity	5.11-6
5.13-1 Noise Monitoring Locations - Index	5.13-5
5.13-2 Noise Monitoring Locations – Segment 1	5.13-6
5.13-3 Noise Monitoring Locations – Segment 2	5.13-7
5.13-4 Noise Monitoring Locations – Segment 2	5.13-8
5.13-5 Noise Monitoring Locations – Segment 4.....	5.13-9
7-1 Cumulative Projects	7-6

List of Tables

ES-1 Summary of Significant Unmitigable (Class I) Environmental Impacts of the Proposed Project and Alternatives	ES-13
ES-2 Proposed Project vs. Alternatives, Summary of Environmental Impact Conclusions.....	ES-16
ES-3 Summary of Impacts and Mitigation for the Proposed Project.....	ES-18
1-1 Summary of Potential Permit Requirements	1-5
2-1 Estimated Area of Past Construction Land Disturbance.....	2-4
2-2 Summary of Past Project-related Visual Changes.....	2-10
2-3 Summary of Estimated Construction Emissions from Past Activities	2-12
2-4 Pole Removal and Installation Noise Contour Distances	2-27
3-1 Typical Subtransmission Pole Dimensions.....	3-14
3-2 Staging Area, Construction Laydown Area, and Helicopter Landing Zone Locations.....	3-21
3-3 Estimated Area of Land Disturbance.....	3-30
3-4 Construction Equipment and Workforce Estimates	3-32
3-5 Low- and No-Cost Measures Identified for the Proposed Project.....	3-47
4-1 Summary of Significant Unavoidable Environmental Impacts of the Proposed Project.....	4-6
4-2 Summary of Alternatives Screening Analysis for the Moorpark-Newbury 66 kV Subtransmission Line Project.....	4-7
5.1-1 Major Roads in Proposed Project Area	5.1-12
5.1-2 Summary of Visual Sensitivity Findings Viewer Types, Visual Exposures, and Visual Quality	5.1-15
5.1-3 Guidelines for Determining Adverse Visual Impact Significance	5.1-21
5.3-1 Air Quality Data Summary (2009-2013) for the Study Area.....	5.3-4
5.3-2 State and National Criteria Air Pollutant Standards, Effects, and Sources.....	5.3-6
5.3-3 Proposed Project Peak Day Construction Exhaust Emission Estimates	5.3-13
5.3-4 Proposed Project Peak Day Operation and Maintenance Exhaust Emission Estimates.....	5.3-17
5.3-5 No Project Alternative 2 Peak Day Construction Exhaust Emission Estimates	5.3-21
5.4-1 Vegetation Communities along the Study Area	5.4-2

	<u>Page</u>
List of Tables (continued)	
5.4-2 Special-Status Species Known or With Potential to Occur in the Study Area ...	5.4-11
5.5-1 Fossil Records Search Results for the Proposed Project Area	5.5-8
5.5-2 Paleontological Potential Criteria.....	5.5-13
5.7-1 Proposed Project Area Soils and Soil Properties	5.7-5
5.7-2 Faults in the Proposed Project Vicinity	5.7-7
5.8-1 California Greenhouse Gas Emissions.....	5.8-2
5.8-2 Proposed Project Construction GHG Emissions	5.8-8
5.8-3 Proposed Project Amortized Annual Emissions	5.8-9
5.8-4 No Project Alternative 2 Emissions	5.8-11
5.9-1 Hazardous Materials Sites in the Vicinity of the Proposed Project	5.9-3
5.10-1 Beneficial Uses of Water Bodies at the Proposed Project Sites and Surrounding Areas	5.10-8
5.10-2 Selected Water Quality Objectives.....	5.10-9
5.10-3 Water Quality Limited Segments in the Proposed Project Area	5.10-9
5.12-1 California Mineral Land Classification System Category Descriptions	5.12-3
5.13-1 Measured Ambient 1-Hour Noise Levels at Sensitive Receptors	5.13-4
5.13-2 Ventura County Construction Activity Noise Threshold Criteria	5.13-12
5.13-3 Construction Activity Noise Contour Distances	5.13-16
5.13-4 Construction Noise Levels at Sensitive Receptor Locations	5.13-17
5.14-1 2014 Population Estimates in the Proposed Project Area.....	5.14-1
5.14-2 Historic and Projected Population Growth in the Proposed Project Area	5.14-2
5.14-3 2014 Housing Data Estimates in the Proposed Project Area	5.14-2
5.14-4 Household Estimates: 2008 to 2035.....	5.14-2
5.16-1 Parks Within 1 Miles of the Proposed Project	5.16-2
5.17-1 Current Level of Service (LOS) at CMP-Monitored Intersections that May Be Used During Construction and Operations.....	5.17-3
5.18-1 Solid Waste and Recycling Facilities that Serve the Proposed Project Area	5.18-2
5.18-2 Diversion Rates	5.18-3
5.18-3 2012 Jurisdictional Per Capita Disposal Rates.....	5.18-4
6-1 Summary of Significant and Unavoidable (Class I) Environmental Impacts of the Proposed Project and Alternatives	6-3
6-2 Proposed Project vs. Alternatives, Summary of Environmental Impact Conclusions.....	6-4
7-1 Cumulative Scenario – Approved and Pending Projects.....	7-3
10-1 Mitigation Monitoring, Reporting, and Compliance Program for the Moorpark-Newbury 66 kV Subtransmission Line Project	10-9

This page intentionally left blank